

CYPERACEAE OF THAILAND (EXCL. CAREX)

by

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SUMMARY

This is an enumeration of 174 examined species and of 11 not examined ones, in 16 genera, collected in or recorded from Thailand. The treatment is largely in the same way as in the 'Flora Siamensis Enumeratio'. Synonyms and references are given. All examined specimens are listed for each of the 7 provinces of Thailand indicated on a map, and their field notes are recorded. Distribution outside Thailand is given in some detail, and occasionally nomenclatural or other notes are added.

In *Lepironia* 1 species is recognized, in *Mapania* 5, in *Hypolytrum* 1, in *Puirena* 2, in *Lipocarpha* 2, in *Hemicarpha* 1, in *Scirpus* 10, in *Eleocharis* 8, in *Fimbristylis* 51, in *Bulbostylis* 3, in *Cyperus* 53, in *Rhynchospora* 7, in *Tridactylaria* 1, in *Schoenus* 2, in *Gahnia* 1, in *Scleria* 23.

Novelties are *Fimbristylis gracilentata* var. *psilopoda*, *Scleria triflora* ssp. *ferruginea* (Ohwi), and *Scleria reticulata* (Holtz.).

An index to collectors' numbers is given at the end.

During my studies on the Cyperaceae of Malaysia for the Flora Malesiana I have also identified all materials from Thailand which came into my hands, with the exception of the species of the genus *Carex*, the elaboration of which it was agreed should be performed by Dr. M. Raymond. As most members of the sedge family are widely distributed these identifications were necessary for plant geographical reasons.

It appeared during this work that numerous species had never properly been recorded for the Thailand flora. This induced me to borrow all the cyperaceous sheets which are contained in the Herbaria of the Department of Agriculture (Curator Mr. Kasin Suvatabandhu) and of the Royal Forest Department (Curator Mr. Tem Smitinand) at Bangkok. The former herbarium consists mostly of a very large set of Kerr's collections, the latter incorporates many collections newly made by Mr. Smitinand and other members of his department. In addition sheets of Thailand Cyperaceae preserved in the Leyden, Kew, and Copenhagen Herbaria have been investigated.

* Rijksherbarium, Leyden.

Though I have not ventured on tracing at Paris and in other herbaria all other specimens collected in Thailand, I assume that the present enumeration represents a substantial precursor towards a future comprehensive account of the *Cyperaceae* in the "Florae Siamensis Enumeratio".

In it I have evaluated former publications on Thailand *Cyperaceae* in a similar way as has been done in the "Enumeratio".

The specimens cited have been enumerated under the 7 floristic regions or provinces of Thailand as adopted by Mr. Smitinand in his study on the genus *Dipterocarpus* in Thailand (cf. Thai Forest Bull., Bot., no. 4, 1958): — Northern (N.), North-Eastern (N.E.), Eastern (E.), Central (C.), South-Eastern (S.E.), South-Western (S.W.), and Peninsular (PEN.).

I express my sincere thanks to Messrs Smitinand and Suvatabandhu for their interest and cordial co-operation in entrusting me their material and verifying the exact spelling of names of persons and localities which were sometimes difficult to copy from the herbarium labels.

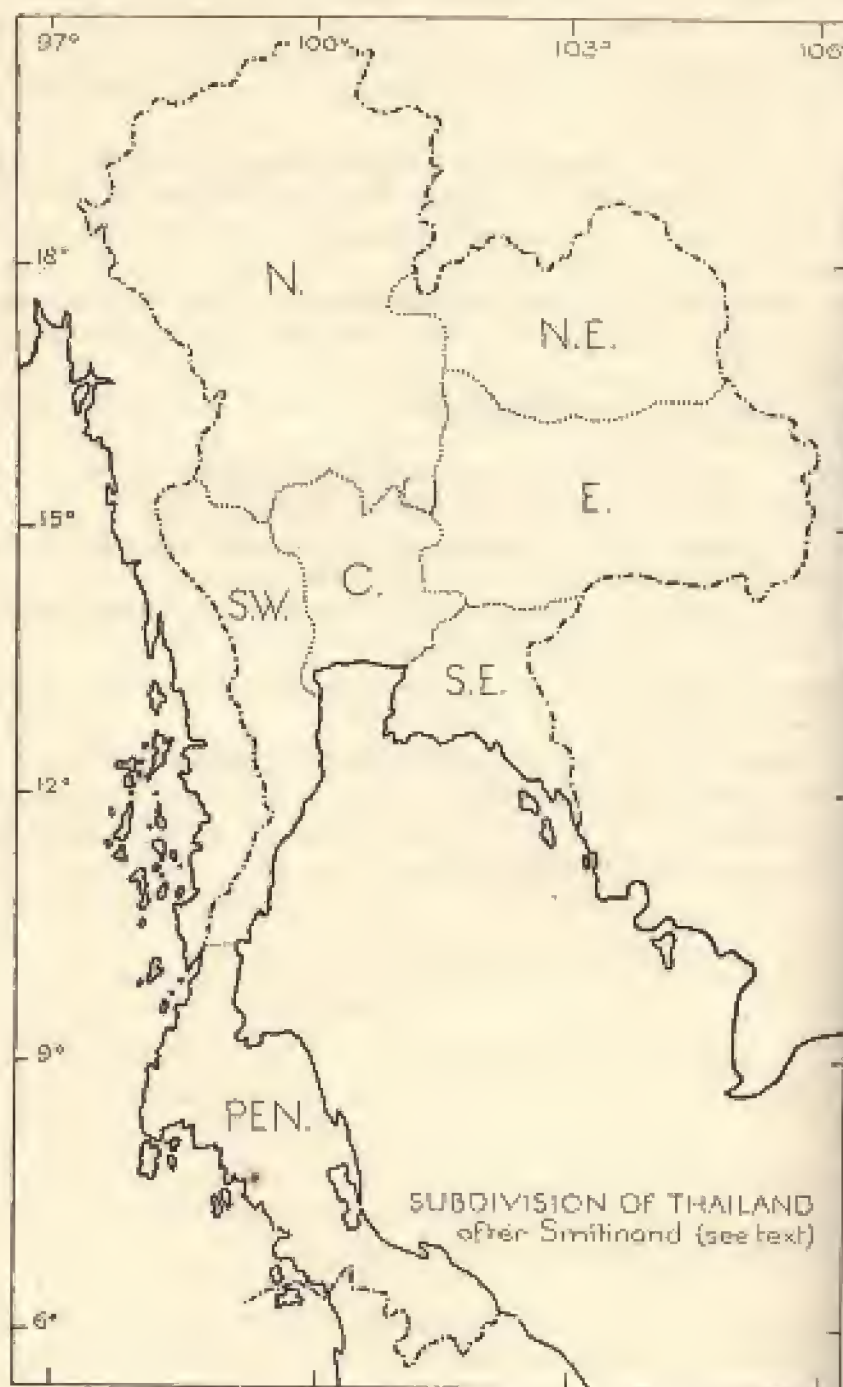
Eleven names of *Cyperaceae* have been cited in literature of which I have not seen the specimens on which the records were based. These names are listed at the end of the enumeration. Some of them are probably based on erroneous identifications or are in my opinion doubtful. It falls beyond the scope of my work to try to verify them.

Finally, for reasons of facility, I have added an index to collectors' numbers.

The following abbreviations have been used for literature references:

- F.B.I. — Hooker, J. D., Flora of British India 6. 1893-1894. *Cyperaceae* by C. B. Clarke.
- F.L.C. — Lecomte, H., Flore Générale de l'Indo-Chine 7. 1912-1922. *Cyperacées* par E. G. Camus.
- F.K.C. — Schmidt, J., Flora of Koh Chang. Contributions to the knowledge of the vegetation in the Gulf of Siam. — *Cyperaceae* by C. B. Clarke. Bot. Tidsskr., 21: 79-94. 1901.
- F.M.P. — Ridley, H. N., Flora of the Malay Peninsula 5. 1925.
- Hoss. 1910 — Hosseus, C. C., Beiträge zur Flora Siam's. Bot. Centralbl., Beih. 27, 2: 456-507. 1910.
- Hoss. 1911a — Hosseus, C. C., Beiträge zur Flora von Wang Djae am M. Ping in Mittel-Siam. Bot. Jahrb. 45: 366-374. 1911.
- Hoss. 1911b — Hosseus, C. C., Die botanischen Ergebnisse meiner Expedition nach Siam. Bot. Centralbl., Beih. 28, 2: 357-457. 1911.
- Kern — Kern, J. H., Florae Malesianae Praecursores XXV. — Notes on Malaysian and some S. E. Asian *Cyperaceae* VIII. Blumea 10: 635-651. 1960.

- Kill. — Killip, E. P., List of sedges (Cyperaceae) collected in Siam by Dr. Hugh M. Smith, Journ. Siam Soc. Nat. Hist. Suppl. 7: 55-57. 1927.
- Koy. 1955 — Koyama, T., An Enumeration of Hayata's Indo-Chinese collection of Cyperaceae: *Carex* and *Cyperus*, Naturaliste canad. 82: 194-216. 1955.
- Koy. 1957 — Koyama, T., An Enumeration of Hayata's Indo-Chinese collection of Cyperaceae, Contrib. Inst. Bot. Univ. Montréal 70: 5-64. 1957.
- Mat. F. M. P. — Ridley, H. N., Materials for a Flora of the Malayan Peninsula 3. 1907.
- Ost. — Ostenfeld, C. H., A list of plants collected in the Raheng district, Upper Siam, by Mr. E. Lindhard, Bull. Herb. Boiss., sér. 2, 5: 709-724. 1905.
- Raym. — Raymond, M., Additional notes on some S. E. Asiatic *Scirpus*, Naturaliste canad. 86: 225-242. 1959.
- Ridl. 1911 — Ridley, H. N., An account of a botanical expedition to Lower Siam, Journ. Str. Br. Roy. As. Soc. no 59: 27-234. 1911.
- Ridl. 1912 — Ridley, H. N., A botanical excursion to Pulau Adang, Journ. Str. Br. Roy. As. Soc. no 61: 45-65. 1912.
- Ridl. 1915 — Ridley, H. N., The plants of Koh Samui and Koh Pennan, Journ. F. M. S. Mus. 5: 158-168. 1915.
- Ridl. 1920 — Ridley, H. N., On a collection of plants from Peninsular Siam, Journ. F. M. S. Mus. 10: 65-126. 1920.
- Turr. — Turill, W. E., in Crabb, Contributions to the Flora of Siam, Kew Bull. (1912): 421-427. 1912.
- Will. — Williams, F. N., Liste des plantes connues du Siam, Bull. Herb. Boiss., sér. 2, 4: 217-232. 1905.



I. *LEPIRONIA* L. C. Rich.

1. *L. ARTICULATA* (Retz.) Domin, Bibl. Bot., Heft 85: 486. 1915. — *Restio articulatus* Retz., Obs. 4: 14. 1786. — *L. mucronata* L. C. Rich. in Pers., Syn. 1: 70. 1805; F.B.I.: 684; Mat. F.M.P.: 107; F.I.C.: 179, f. 25; F.M.P.: 175.

C.—Bangkok, cultivated: *Savatbaudha* n.n. (BK).

S.W.—Chumphaw, Bang Son; *Put* 1537 (BK); Ban Tung Maha, in marsh, near sealevel: *Kerr* 11897 (BK).

Puket, Takuapa, in large clumps in stagnant water, 10 m: *Kerr* 17108 (BK).

Trang, Huay Yawt, Thale Sawng Hawn, common on sandy bank of freshwater lake, under 100 m, local name *chut*: *Smithson* 3024 (EPD 18194) (L).

DISTR. Madagascar, Ceylon, Indo-China, S. China, Malaysia, N. and E. Australia, Caroline Islands, New Caledonia, Fiji.

The stems are used for matting.

II. *MAPANIA* Aubl.

2. *M. CUSPIDATA* (Miq.) Uitt., Journ. Arn. Arb. 20: 213. 1939. — *Lepironia cuspidata* Miq., Fl. Ind. Bat., Suppl.: 603. 1861. — *M. humilis* (non F.Vill.) F.B.I.: 683; Mat. F.M.P.: 105; F.M.P.: 174, non *Pandanophyllum humile* Steud. — *M. triquetra* Ridl., Journ. Str. Br. Roy. As. Soc. no 41: 51. 1904; Mat. F.M.P.: 106; F.M.P.: 174.

VAR. *CUSPIDATA*

P.N.—Trang, Chum Het, in evergreen forest, 100 m: *Kerr* 14315 (BK).

Satol, Klawng Ton, very common in evergreen forest, 100—300 m: *Kerr* 14432 (BK).

var. *PETIOLATA* (Clarke) Uitt., Journ. Arn. Arb. 20: 213. 1939. — *M. petiolata* Clarke, Kew Bull. add. ser. 8: 54. 1908. — *M. humilis* var. *petiolata* (Clarke) Ridl., Fl. Mal. Pen. 5: 174. 1925.

P.N.—Langsuan, Ban Krugi, in evergreen forest, 200 m: *Kerr* 12006 (BK).

Pang Nga, Kua Kathakwam, in evergreen forest, 100 m: *Kerr* 18729 (BK).

Nakawn Srithansurat, Khao Luang, common on slope and near stream in evergreen jungle, 600 m: *Smithson* 1926 (BKF).

Trang, Kao Soi Dao, in evergreen forest, 500 m: *Kerr* 18161 (BK).

Pattani, Uplong, in evergreen forest, 200 m: *Kerr* 7505 (BK).

Satol, Adang, marshy ground in evergreen forest, 20 m: *Kerr* 14329 (BK).

DISTR. Malaysia, Solomon Islands.

The varieties are based on the shape of the leaf-blades and connected by many intermediates. Probably they are merely ecological forms.

3. *M. PALUSTRIS* (Hassk. ex Steud.) F.Vill., Nov. App.: 309. 1882; F.B.I.: 681; Mat. F.M.P.: 103; F.M.P.: 172. — *Pandanophyllum palustre*

Hassk. ex Steud., Syn. 2: 134, 1855. — *M. andamanica* Clarke, Fl. Br. Ind. 6: 681, 1894; Ridl. 1920: 124. — *M. albescens* Clarke, Kew Bull. add. ser. 54, 1908; F.M.P.: 172.

PEN. — Takuapa, Bangwan, common in light evergreen forest, 10 m: *Kerr 17629* (BK).
Pattani, Kao Kalakiri, common in evergreen forest, 800 m: *Kerr 14997* (BK).
DISTR. From Assam to S. China and Malaysia.

Mapania andamanica is more slender and has smaller spikelets and flowers than typical *M. palustris*. *Mapania albescens* differs from *M. andamanica* only by the pale colour of the dried specimens. In my opinion they are not specifically distinct from *M. palustris*.

4. *M. KURZII* Clarke, Fl. Br. Ind. 6: 681, 1894; Mat. F.M.P.: 104; F.M.P. 172. — *M. longispica* Ridl., Journ. Str. Br. Roy. As. Soc. no 44: 205, 1905; Mat. F.M.P.: 104; F.M.P.: 172. — *M. valida* Ridl., Journ. Str. Br. Roy. As. Soc. no 44: 205, 1905; Mat. F.M.P.: 104; F.M.P.: 172.

PEN. — Phung-Nga, Kao Kutakwan, in evergreen forest, 200 m: *Kerr 18404* (BK).
Krahl, Lanta, in evergreen forest, 400 m: *Kerr 18407* (BK).

DISTR. Malay Peninsula, Central Sumatra.

5. *M. ENODIS* (Miq.) Clarke, Kew Bull. add. ser. 8: 53, 1908. — *Lepironia enodis* Miq., Fl. Ind. Bat., Suppl.: 603, 1861. — *M. longa* Ridl. & Clarke, Fl. Br. Ind. 6: 683, 1894, p.p.; Mat. F.M.P.: 105; F.M.P.: 173. — *M. fumida* Uittl., Gard. Bull. S.S. 10: 182, 1939.

S.E. — Trat, Dan Champon, on gravel bank in stream, under 50 m: *Kerr 17692* (BK).
PEN. — Ranawang, Klang Kanpuan, on bank of stream in evergreen forest, 100 m: *Kerr 17694* (BK); same locality, 50 m: *Smithson 4161* (L).

DISTR. Malay Peninsula, Sumatra, W. Borneo.

6. *M. TENUSCAPA* Clarke, Fl. Br. Ind. 6: 683, 1894; Mat. F.M.P.: 105, p.p.; Ridl. 1911: 224; 1912: 63; F.M.P.: 173, p.p.

S.E. — Chantabun, Kao Sabay, in evergreen forest, 200 m: *Kerr 16935* (BK).

Trat, Kaw Chang, Khisung Nonsi, by streams in evergreen jungle, 5 m: *Smithson 3682* (L).

PEN. — Ranawang, Kaw Chang, in evergreen forest, 5 m: *Kerr 16995* (BK).

Takuapa, Bangwan, common in light evergreen forest, 10 m: *Kerr 17632* (BK).

Phung-Nga, Kao Kutakwan, in dry evergreen forest, 100 m: *Kerr 18500* (BK).
Trang, Chuang, very common on slope in evergreen jungle, 150 m: *Smithson 4116* (RFD 16999) (L).

Satul, Kluang Ton, common in evergreen forest, 100 m: *Kerr 14626* (BK, B. K.); Rawel Island: *Ridley 15718* (BM, K, SING).

DISTR. Indo-China, Malaysia.

III. *HYPOLYTRUM* L. C. Rich.

7. *H. NEMORUM* (Vahl) Spreng., Syst. 1: 233. 1825. — *Schoenus nemorosus* Vahl, Symb. Bot. 3: 8. 1794. — *H. latifolium* L. C. Rich. in Pers., Syn. 1: 70. 1805; F.B.I.: 678; F. KC.: 92; Will.: 223; Mat. F.M.P.: 100; Hoss. 1910: 457; F.I.C.: 171, f. 22, 2—8; Ridl. 1920: 124; F.M.P.: 170.

E. — Kerat, Katok, by stream in evergreen forest, 400 m: *Kerr 3158* (BK); 500 m: *Kerr 3177* (BK).

S.E. — Nawng Phu: *Mex Collinsa 345* (BK).

Tint, Kao Kuap, in light evergreen forest, 700—800 m: *Kerr 17737* (BK); Kao Saming: *Put 516* (BK); Kaw Chang, Khlawng Mayom, common by stream on sandy bank in evergreen forest, 5 m: *Smithland 2172* (*RFD 11534*) (BKF); Kaw Chang, Khlawng Mayom, common in evergreen forest, 100 m: *Kerr 6800* (BK); Kaw Chang, Khlawng Nonsi, scattered along stream bank in evergreen jungle, 50 m: *Bunnak 338* (*RFD 12317*) (BKF).

S.W. — Chumphaen, Kuring, in evergreen forest, 50 m: *Kerr 11006* (BK); Kao Tong, in evergreen forest, 500 m: *Kerr 12304* (BK).

PEN. — Ranawng, La-un, in evergreen forest, 20 m: *Kerr 16394* (BK).

Longuun, Tako: *Put 1688* (BK); same locality, in evergreen forest, under 50 m, local name *tau saent*: *Kerr 17895* (BK); Kao Nom Sao, in evergreen forest, 900 m: *Kerr 14038* (BK); Satol, Adang, in evergreen forest, 50 m: *Kerr 14025* (BK).

DISTR. From India to Formosa, N. E. Queensland, and Polynesia.

IV. *FUIRENA* Rottb.

8. *F. UMBELLATA* Rottb., Progr.: 27. 1772; F.B.I.: 666; Mat. F.M.P.: 80; F.I.C.: 141, f. 18, 6; Turr.: 425; F.M.P.: 162. — *F. mucinata* (non Kunth) F.I.C.: 141.

C. — Chaibadan, Dong Pyn Yen, in marshy savannah, 100 m: *Kerr 8008* (BK).

S.E. — Chueburi, Makham, Ban Saengthwang, common in wet localities, 140 m: *Bunnak 165* (L).

Prachinburi, Aran Prathet: *Put 5037* (BK); Watana: *Put 1952* (BK).

S.W. — Chumphaen, Bang Son: *Put 1503* (BK).

PEN. — Ranawng, Kaw Chang, at edge of ditch in *Melaleuca* forest, 5 m: *Kerr 16564* (BK).

Satol, Kuan Po, on edge of stream, 20 m: *Kerr 13786* (BK).

DISTR. Tropical and subtropical regions of the whole world.

9. *F. CILIARIS* (L.) Roxb., Fl. Ind. 1: 184. 1820. — *Scirpus ciliaris* L., Mant. 2: 182. 1771. — *F. glomerata* Lamk, Tabl. Enc. M  th. Bot. 1: 150. 1791; F.B.I.: 666; F. KC.: 90; Will.: 224; Mat. F.M.P.: 81; Hoss. 1910: 460; Ridl. 1911: 224; F.I.C.: 140; F.M.P.: 163. — *F. wallichiana* (non Kunth) F.I.C.: 141.

S.E. — Prachinburi, Nah Kall, 30 ft: *Mrs Collins 1902* (BK).

C. — Bangkok, along railway trail, under 5 m: *Kerr 6720* (BK); Bangkok, Bangkhen, RFD Compound, near water, 5 m: *Swinton 5419* (RFD 16726) (L); Bangkok, Klong side: *Bryl Smith 225* (BK).

Dhombur: *Thamree Boonlong 2* (BK).

PEN. — Koh Samui, Ban Ban Put, in scrub, under 5 m: *Kerr 15711* (BK).

DISTR. Tropical Africa, S.E. and E. Asia, Malaysia, tropical Australia.

V. LIPOCARPHA R. Br.

10. *L. chinensis* (Osb.) Kern, Blumea, Suppl. 4: 167, 1958. — *Scirpus chinensis* Osb., Dagb. Ostind. Resa: 220, 1757. — *Scirpus senegalensis* Lamk; Tabl. Enc. Méth. Bot. 1: 140, 1791. — *Hypaecliptum argenteum* Vahl, En. 2: 283, 1806. — *L. argenteum* (Vahl) R. Br. ex Nees, Linnaea 9: 287, 1835; F.B.I.: 667; Mat. F.M.P.: 81; Hoss, 1910: 457; 1911b: 370; F.I.C.: 143, t. 1, f. A, 1—2; Turr.: 425; F.M.P.: 163. — *L. senegalensis* (Lamk) Th. & Hél. Durand, Syll. Fl. Congol.: 619, 1909; Kay, 1957: 53. — *L. triceps* (non Nees) F.I.C.: 144.

N. — Chiangmai, Doi Suthep, common by stream in swampy ground, 1100 m: *Swinton 121* (RFD 6770) (L); 700 m, *Hosocus 481* (L).

N.E. — Loei, Phu Krading, in open pine forest, 1300 m: *Dee 37* (RFD 4900) (L).

PEN. — Tring, Sikso, on low-lying open ground, near sealevel: *Kerr 19003* (BK).

DISTR. Tropical and South Africa, Madagascar, Mascarene Is., S. and S.E. Asia, Malaysia, tropical Australia.

11. *L. sphacelata* (Vahl) Kunth, En. 2: 267, 1837; F.B.I.: 667. — *Hypaecliptum sphacelatum* Vahl, En. 2: 283, 1806.

E. — Korat, Ban Yui: *Poe 4293* (BK).

S.W. — Kunburi, scattered in wet locality, 60 m: *Swinton 3850* (RFD 10091) (BK).

DISTR. From Nepal to Ceylon and Thailand, also recorded from tropical Africa and America.

12. *L. MICROCEPHALA* (R. Br.) Kunth, En. 2: 268, 1837; F.B.I.: 668; Mat. F.M.P.: 82, p.p.; F.I.C.: 144; F.M.P.: 163, p.p. — *Hypaecliptum microcephalum* R. Br., Prodr.: 220, 1810.

S.E. — Prachinburi, Aran Prathat, in open low-lying grassy ground, 50 m: *Kerr 19528* (BK).

DISTR. S.E. and E. Asia, Malaysia, Australia.

VI. HEMICARPHA Nees

13. *H. ISOLEPSIS* Nees, Edinb. New Phil. Journ. 17: 263, 1834; in Wight, Contr. Bot. Ind.: 92, 1834. — *Scirpus isolepis* (Nees) Boeck., Linnaea 36: 498, 1870; F.B.I.: 663.

E. — Korat, Chan Tuk, among low herbage on open ground, 300 m: *Kerr 8064* (BK).

DISTR. Tropical Africa, India.

VII. SCIRPUS L.

14. *S. GROSSUS* L. f., Suppl.: 104. 1781; F.B.I.: 659; Ridl. 1911: 222; F.I.C.: 136; Turr.: 425; F.M.P.: 162; Koy. 1957: 60; Raym.: 227.

C.—Dhemburi, Bang Plat (Bangkok ref.), common in wet and inundated areas, under 10 m, local name *kak*: *Switinand 2797* (BKf).

Bangkok, along ditch, local name *kak ta krap*: *Kerr 19714* (BK).

S.E.—Lerichabang-swamp near Sriracha, c. 20 ft: *Men Cullina 1896* (BK).

DISTR. From India to S. China and tropical Australia.

"Chantabun mats are said to be made from the stems of this species" (Collins).

15. *S. AFFINIS* Roth in R. & S., Syst. Veg. 2: 140. 1817; F.I.C.: 137. — *S. maritimus* L. var. *affinis* (Roth) Clarke, Fl. Br. Ind. 6: 659. 1893.

S.E.—Nakawa Panom, Tat Panom, in damp ground at edge of river, 200 m: *Kerr 21409* (BK).

DISTR. Widely distributed in Central and S.E. Asia.

Very near to *S. maritimus* L. and possibly a subspecies of this widespread, polymorphic species.

16. *S. WICHURAI* Boeck., Linnaea 36: 729. 1870; Raym.: 226. — *S. eriophorum* (non Michx.) F.B.I.: 661.

N.E.—Loei, Phu Krading, not common by stream in evergreen jungle, 1300 m: *Switinand 1974* (KFD 2459) (BKf).

DISTR. From India to S. China, Korea, Japan, and Central Sumatra.

17. *S. LITORALIS* Schrad., Fl. Germ. 1: 142, t. 5, f. 7. 1806; F.B.I.: 659.

PEN.—Patulung, Kaw Si Kaw Ita, in water about 1 m deep, in inland sea (water nearly fresh), very common along shore of limestone islets: *Kerr 15142* (BK).

DISTR. From the Mediterranean region through S. Asia (here very local) to Australia.

18. *S. MUCKONATUS* L., Sp. Pl. 1: 50. 1753; F.B.I.: 657; Mat. F.M.P.: 79; F.I.C.: 134; Turr.: 425; F.M.P.: 161; Koy. 1957: 59; Raym.: 232.

N.—Chidengrai, in swamp, 450 m; Winit 777 (BKf).

S.W.—Chumphaw, Ban Tung Maha, in marshy ground, near sealevel: *Kerr 11403* (BK).

Patani, Yala, in open marshy ground, under 50 m: *Kerr 7261* (BK).

PEN.—Nakawa Srithammarat, Tung Sang, in rice-field, local name *chut an*: *Hobbs 149* (BK).

DISTR. From S. Europe through S. Asia to Japan and Australia.

19. *S. JUNCOIDES* Roxb., Fl. Ind. 1: 218. 1820; Raym.: 236. — *S. erectus* (non Poir.) F.B.I.: 656; Mat. F.M.P.: 79; Ridl. 1911: 222; F.I.C.: 136; F.M.P.: 161.

S.E. — Chanburi, Makhant, Thung Malu, common in wet localities, 130 m: *Reinard 16* (RFD 2609) (L.).

Trat, Huey Raeng, Dong Madue, common in rice-field, under 50 m, local name *phuang blum yai*: *Smithson 1402* (RFD 8777) (BKF); Kaw Chang, Khlawn Nonsi, in flooded ricefields, under 10 m: *Kerr 5128* (BK).

S.W. — Near Neekey, near Wangka, along pools, 150 m: *den Hoed 220* (*Kraus N. R. basia rep.* 1848) (BK, L.).

PEN. — Ranawng, Kraburi, on edge of rice-field, 10 m: *Kerr 16250* (BK); Lam Lien, in stagnant water, 10 m: *Kerr 16382* (BK); Nam Chut, in marshy ground, near seculvel, local name *chak an*: *Kerr 11100* (BK).

DISTR. Madagascar; from India, China, and Japan to tropical Australia.

20. *S. ARTICULATUS* L., Sp. Pl. 1: 47. 1753; F.B.I.: 656; F.I.C.: 133; Raym.: 232.

C. — Bangkok, in rice-fields, under 5 m: *Kerr 6750, 11100* (BK); Bangkok, Bangkhien, RFD Compound, near water, under 10 m: *Smithson 5420* (RFD 19729) (L.).

S.W. — Rajaburi, Potaram, in paddy fields: *Kerr 3857* (BK).

DISTR. From the Mediterranean region through Africa and S. Asia to tropical Australia.

21. *S. LATERIFLORUS* Gmel., Syst. Veg. 1: 127. 1791; Raym.: 234. — *S. lateralis* Reiz., Obs. 4: 12. 1786, non Forsk. 1775. — *S. supinus* L. var. *uninodis* Clarke, Fl. Br. Ind. 6: 656, 1893, quoad specim. cit., non *Isotepis uninodis* Delile. — *S. supinus* (non L.) Mat. F.M.P.: 79; F.I.C.: 135; F.M.P.: 163. N. — Chiengmai, Mae Taeng, in rice-field, 300 m: *Smithson 2928* (L.).

C. — Bangkok, in flooded rice-fields: *Kerr 3860* (BK); along railway line: *Kerr 6750* (BK); Bangkok, Bangkok, RFD Compound, near water, under 10 m: *Smithson 5418* (RFD 19737) (L.).

DISTR. From India to S. China, Formosa, and Australia.

22. *S. ANNAMICUS* Raymond, Naturaliste canad. 84: 137. 1957; Raym.: 239.

PEN. — Kukan, Hui Nua, open ground by roadside, 100 m: *Kerr 8323* (BK, K).

DISTR. Annam (type locality).

23. *S. SQUARROSUS* L., Mant.: 181. 1771; F.B.I.: 663; F.I.C.: 134; Turr.: 425; Raym.: 228.

S.W. — Kanburi, common in wet ground, 50 m: *Smithson 3861* (RFD 16002) (L.).

DISTR. S. Asia, extending to Singapore Island.

24. *S. SIAMENSIS* (Clarke) Kern, Blumea 9: 219. 1958; Raym.: 230. — *S. squarrosus* L. var. *siamensis* Clarke in Hosseus, Beitr. Fl. Siam, Beitr. Bot. Centralbl. 27: 460. 1910; Hoss. 1911a: 372; 1911b: 371; F.I.C.: 134. — *Lipocarpa tenera* (non Boeck.) F.I.C.: 143. — *Ascolepis* sp. n., Turr.: 425.

— *Scirpus chinensis* Osb. var. *siamensis* (Clarke) Raym., *Naturaliste canad.* 84: 124. 1957.

N — Nakorn Sawan, Wang Diao, savannah forest, common. 100 m: *Hosson 107* (P, type).

DISTR. Laos, Tonkin, Cochinchina.

VIII. *ELEOCHARIS* R. Br.

25. *E. CONGESTA* D. Don, *Prodr. Fl. Nepal.*: 41. 1825; F.B.I.: 630; F.I.C.: 88; Koy. 1957: 37. — *E. pellucida* Presl, *Rel. Haenk.* 1: 196. 1828; Koy. 1957: 37. — *E. afflata* Steud., *Syn.* 2: 76. 1855; F.B.I.: 629; F.I.C.: 87, f. 13. 5 — *E. subnivea* Boeckl., *Linnaea* 36: 424. 1870; F.B.I.: 629.

S.E. — Loi, Phu Krading, Tham Saw, common in swampy ground, under water, 1300 m: *Smithland 1123* (RFD 7865).

E. — Chaiyaphum, Po Rio, edge of pool, 1000 m: *Kerr 30219* (BK).

DISTR. S.E. Asia, from India to China, Japan, and Malaysia.

Eleocharis congesta and *E. pellucida* are treated as specifically distinct by Svenson, the monographer of the genus. He distinguishes between them only by the thicker rigid stems of the former. I think it is impossible to trace a dividing line between the two.

26. *E. RETROFLEXA* (Poir.) Urb., *Symb. Ant.* 2: 165. 1900. — *Scirpus retroflexus* Poir. in Lamk, *Enc.* 6: 753. 1804. — *E. chaetaria* R. & S., *Syst. Veg.* 2: 154. 1817; F.B.I.: 629; F. KC.: 84; Willd.: 224; Mat. F.M.P.: 77; Hoss 1910: 460; F.I.C.: 87, f. 12, 7—8; F.M.P.: 151.

S.E. — Chantabun: *Ventersdal 463* (SING).

PEN. — Ranong, Nam Chut, on mud at edge of marshy ground, near sealevel: *Kerr 11707* (BK).

Pattani, Kok Po, on damp sandy soil by stream, near sealevel: *Kerr 7086* (BK).

DISTR. Pantropic.

To me the differences between *E. retroflexa* (the New World 'species') and *E. chaetaria* (the Old World one) are too trifling to justify specific separation.

27. *E. ACUTANGULA* (Roxb.) Schult. in R. & S., *Mant.* 2: 91. 1824. — *Scirpus fistulosus* Poir., *Enc.* 6: 749. 1804, *non* Forsk. 1775. — *Scirpus acutangulus* Roxb., *Fl. Ind.* 1: 216. 1820. — *E. fistulosa* Schult. in R. & S., *Mant.* 2: 89. 1824; F.B.I.: 626; Mat. F.M.P.: 76; Ridl. 1911: 222; F.I.C.: 84, f. 13, 3—4; F.M.P.: 151.

S.E. — Trut, Huay Raeng, Dong Maduae, common in rice-field, under 50 m: *Smithland 1491* (RFD 6776) (L).

PEN. — Songkhla, Chama, in open fields, under 20 m: *Kerr 15798* (BK).

Pattani, Saiburi, paddy fields, 25 m: *Kerr 7231* (BK).

DISTR. Widely distributed but uncommon species in the tropics of the whole world.

28. *E. SPIRALIS* (Roth.) R. & S., Syst. Veg. 2: 155, 1817; F.B.I.: 627; F.I.C.: 85, f. 11, 6—7. — *Scirpus spiralis* Roth., Deser. & Ic.: 15, t. 15, f. 1, 1773.

PEN. — Satul, in marshy ground: *Kerr 13759* (BK).

DISTR. Tropical Africa, Madagascar, Mauritius, Ceylon, S. India, S. China, Malaysia, tropical Australia, New Caledonia.

29. *E. PHILIPPINENSIS* Svens., Rhodora 31: 155, f. 9, 1929; Kern, Reinw. 4: 94, 1956.

C. — Bangkok, open, low lying, marshy ground: *Kerr 11105* (HK, BO, K, L).

DISTR. Tropical Australia, New Caledonia, Malaysia, Hainan.

30. *E. OCHROSTACHYS* Steud., Syn. 2: 80, 1855; F.B.I.: 626; Mat. F.M.P.: 76; F.M.P.: 151. — *Scirpus laxiflorus* Thwaites, En. Pl. Zeyl.: 485, 1864. — *E. variegata* (Poir.) Presl var. *laxiflora* (Thwaites) Clarke, Fl. Br. Ind. 4: 626, 1893; Turr.: 423.

S.E. — Chanthuri, Mahkam, common in wet localities in scrub forest, 150 m: *Switinand 3956* (L).

Trat, Kao Kuap, in damp ground by stream, 600 m: *Kerr 17753* (BK).

PEN. — Phang-Nga, Kaw Yao Yai, in open marshy ground, 6 m: *Kerr 17354* (BK). Nakawa Srithammarat, The Sunset, under 50 m: *Kerr 14599* (BK).

Trung, Kantang, common in swamp, under 50 m: *Switinand 3952* (RFD 12618) (L); Huay Yawet, Thale Sawang Hawng, sandy bank of fresh water lake, 100 m: *Switinand 3926* (RFD 17243) (L).

DISTR. From India and Ceylon to Formosa, the Riu Kiu Islands, Malaysia, Micronesia, and Melanesia.

31. *E. DULCIS* (Burm. f.) Henschel, Vita Rumph.: 186, 1833. — *Andropogon dulce* Burm. f., Fl. Ind.: 219, 1768. — *Scirpus plantagineus* Retz., Obs. 5: 14, 1789. — *E. plantagineus* (Retz.) R. & S., Syst. 2: 150, 1817; F.B.I.: 625; Mat. F.M.P.: 75; F.I.C.: 82; F.M.P.: 150. — *E. equisetina* Presl, Rel. Haenk. 1: 195, 1828; F.B.I.: 626; F. KC.: 85; Will.: 224; Mat. F.M.P.: 75; Hoss. 1910: 460; Ridl, 1911: 222; F.I.C.: 83; Turr.: 423; F.M.P.: 150.

C. — Bangkok, in marsh, local name *ya-choep-latiam*: *Doonbrahm 8* (HK); in shallow ditch: *Kerr 7003* (BK); edge of flooded rice-fields: *Kerr 13526* (BK); rice-fields, 40 m: *Eryl Smith 931* (BK).

S.E. — Near Seiracha, 30 ft: *Mrs Collins 1398* (BK).

PEN. — Surat, in shallow pool, under 10 m: *Kerr 11289* (BK).

Satul, B. Rayak: *Ridley 14809* (BM, SING).

DISTR. Tropical West Africa, Madagascar; from India to S. China, Formosa, Riu Kiu Islands, and Japan, Malaysia, Micronesia, Melanesia, tropical Australia.

32. *E. GEMICULATA* (L.) R. & S., Syst. Veg. 2: 150. 1817. — *Scirpus gemiculatus* L., Sp. Pl. 1: 48. 1753. — *Scirpus caribaeus* Rottb., Progr.: 24. 1772. — *E. capitata* R. Br., Prodr.: 225. 1810; F.B.I.: 627; F. KC.: 84; Will.: 224; Mat. F.M.P.: 77; Hoss. 1910: 460; F.I.C.: 85; F.M.P.: 151. — *E. caribaea* (Rottb.) S. F. Blake, Rhodora 20: 24. 1918; Koy. 1957: 37.

S.E. — Trat, Kaw Chang, Lam Dan Kan, in marshy ground by sea, 5 m; Kerr 2236 (BK); Kaw Chang, Khlawng Mueon, common in damp localities in waste ground, 5 m; Smitinand 2217 (RFD 11540) (L.); Kaw Kut, Khlawng Nonsi, by paths in sandy soil, 5 m; Smitinand 5658 (L.).

S.W. — Chumphaw, Bang Sen; Pot 1644 (BK).

DISTR: Warmer parts of the whole world.

In a letter to Svenson, published in Rhodora 11: 50. 1939, Dandy pointed out that the correct name for this species under *Eleocharis* is *E. gemiculata* (L.) R. & S. In a later publication (N. Am. Fl. 18, 9: 520. 1957) Svenson reverts to the binomial *E. caribaea*, as (l.c. p. 533) "the name *Scirpus gemiculatus* included *E. caribaea* and the plant known as *Juncus acutiflorus gemiculatus*, *capitatus equiseti*, *major* Sloane" and "in the second edition of *Species plantarum* (1762) Linnaeus restricted the name *Scirpus gemiculatus* to the latter." I cannot agree with him. The references in Sp. Pl. ed. 2 are literally the same as in the first edition. The fact that in his diagnosis Linné changed "spica subglobosa" into "spica oblonga" does not affect the choice of the specimen in the Hortus Siccus Cliffortianus as the lectotype of *Scirpus gemiculatus*.

IX. FIMBRISTYLIS Vahl

33. *F. THOMSONII* Boeck., Linnaea 37: 37. 1871; F.B.I.: 646; F.I.C.: 117; Kern, Blumea 8: 110. 1955. — *F. asperrima* (non Boeck.) Ridl. 1911: 222; 1912: 63; F.M.P.: 158, p.p. (quoad specim. P. Rawei).

S. — Chinnamat, Doi Suthep, in the shade in oak forest, 1100 m; Smitinand 128 (RFD 6209) (BKF).

Lampang, Khun Tan, scattered in evergreen forest, 1500 m, local name *guk haew* m; Pot 152 (BKF).

Phetchabun, Lamkao, Phu Her, common in oak forest, 800 m; Smitinand 2591 (L).

N.E. — Loei, Phu Krading, Sam Khse, common in open ground, 1100 m; Smitinand 1187 (RFD 7864) (BKF); Sithan, common in open deciduous forest, 300 m; Phosobhi 1293 (RFD 17000) (L).

E. — Chaiyaphum, Pu Kio, in open grassy ground, 700 m; Kerr 20309 (BK).

S.W. — Kanburi, Pu Keng, in deciduous forest, 100 m; Kerr 20658 (BK, K).

Bongaphan; Koth 338 (SING).

Chumphaw, common in the plain; Kkonthachul 1032 (L).

PHN. — Nakawa Srihamarat, in savannah, 100 m; Kerr 15624 (BK, K).

Rawei Island; Ridley 15729 (BM, K, SING).

DISTR. S. and S. E. Asia, extending to Central Sumatra and the Philippines.

Rhizome locally used against kidney's trouble (Pat).

34. *F. COMPLANATA* (Retz.) Link. Hort. Berol. 1: 292. 1827; F.B.I.: 646; Mat. F.M.P.: 96; F.I.C.: 116; F.M.P.: 158. — *Scirpus complanatus* Retz. Obs. 5: 14. 1789.

E. — Kerat, Bua Yai: *Pat 4291* (BK).

C. — Chabudap, Dong Pys, in marshy savannah, 100 m: *Kerr 8004* (BK).

S.W. — 14 km S.E. of Kin Sayak, grassy plain, gravel, laterite soil, 100—150 m: *Kostermans 1132* (*Ricour Noi R. basin exp. 1946*) (L).

Chumphaw, Kao Tong, in open scrub, 700 m: *Kerr 11538* (BK, K).

DISTR. Pantropic.

35. *F. dura* (Zoll. & Mor.) Merr., Philip. Journ. Sc. 11: Bot. 53. 1916. — *Isolopis dura* Zoll. & Mor. in Mor., Syst. Verz.: 97. 1846. — *F. asperifolia* Boeck., Linnaea 37: 40. 1871; F.B.I.: 643; Mat. F.M.P.: 96; F.I.C.: 116; F.M.P.: 158, excl. specim. P. Rawet.

E. — Kerat, Kutak, by stream in evergreen forest, 400 m: *Kerr 8100* (BK).

S.W. — Krabin, Sakao, in evergreen forest, 50 m: *Kerr 8767* (BK).

Chambul, Makhm, Thung Khui, common in wet localities, 130 m: *Banack 30* (*RFD 8628*) (L).

Trat, Kaw Chang, Khlawng Mayon, in rock crevices in stream bed, 50 m: *Kerr 6815* (BK); Kaw Kul, by the sea in coconut plantations, 5 m: *Smittinand 5705* (L).

S.W. — Bangtaphan: *Keith 482* (SING).

PEN. — Surat, Kanchanadit, in evergreen forest, 5 m: *Kerr 13061* (BK, K); Bangphat, common in evergreen jungle, under 50 m: *Phlornchit 652* (*RFD 12833*).

Trang, Chawug, in rocky ground by stream, 100 m: *Kerr 15158* (BK), *Smittinand 1083* (*RFD 16866*) (L).

Pattani, Bangang Sta, in open scrub, 50 m: *Kerr 7316* (BK).

Pulau Rawet: *Ridley 15715* (BM, K, SING).

DISTR. From India to Indo-China and W. Malaysia.

36. *F. INSIGNIS* Thwaites, En. Pl. Zeyl.: 349. 1864; F.B.I.: 645; F.I.C.: 118; Kern, Blumea 8: 112. 1955. — *F. longispica* (non Steud.) F.M.P. 156, p.p.

N.E. — Luat, Phu Krading, Rest House, in savannah, 1300 m: *Smittinand 5889* (L).

E. — Sarin, in open deciduous forest, 100 m: *Kerr 8231* (BK).

C. — Nakhawn Nayok, Khao Lon, on rock's debris: *Saratananthan s.n.* (BK).

S.E. — Krabi, Aranya, in savannah, under 50 m: *Kerr 19336* (BK).

PEN. — Trang, Bungak, in open sandy ground near sea: *Kerr 15950* (BK).

Songkhla, Kampangpet, in savannah, under 50 m: *Kerr 15977* (BK).

Pattani, on open sandy ground, near sealevel: *Kerr 7751* (BK, SING).

Satun, heathis: *Ridley 14820* (BM, K, SING); in open grassy ground, 5 m: *Kerr 15710* (BK); Adang, in rock crevices, open rocky ground, 300 m: *Kerr 15167* (BK).

DISTR. Ceylon, Tonkin, Cochinchina, Laos, S. China, Malaysia, tropical Australia (Queensland).

37. *F. FALCATA* (Vahl) Kunth, En. 2: 239. 1837; Kern: 645. — *Scirpus falcatus* Vahl, En. 2: 275. 1806. — *F. junciformis* Kunth, En. 2: 239. 1837; F.B.I., 647; F.I.C.: 119.

S.W. — Kanburi, Ta Sakao, in open scrub, 50 m: *Kerr 19525* (BK, K).

DISTR. Madagascar, S. Asia, Malaysia.

38. *F. CYMOSA* R. Br., Prodr.: 228. 1810; F. KC.: 89; Willd.: 224; Hoss. 1910: 460; F.I.C.: 119. — *F. spathacea* Roth, Nov. Pl. Sp.: 24. 1821; F.B.I.: 640; F. KC.: 87; Willd.: 225; Mat. F.M.P.: 93; Hoss. 1910: 462; Ridl. 1911: 222; F.I.C.: 109; F.M.P.: 156; Kill.: 56.

S.E. — Chantaburi, Lem Sing, *Nai Nae 137* (BK, K).

Thal. Kaw Chang, Khilawng Nonsi, common in sandy soil, 5 m: *Switinand 3652* (L); Koh Kuldut, on sandy sea-shores: *Joh. Schmidt 372* (C).

S.W. — Prachuap, Sam Roi Yawt, open grassy ground near sea, under 50 m: *Kerr 19973* (BK).

PEN. — Surut, Kaw Tao, on rocky ground near sea: *Kerr 13910* (BK); Kaw Samui, on sandy ground in coconut plantation, near sealevel: *Kerr 15622* (BK, K); Kaw Samui, Ban Bua Put, in sandy ground near sea: *Kerr 15699* (BK, K); same locality, in open scrub, under 5 m: *Kerr 15700* (BK, K).

Krahi, Koh Lantia, on sandy ground in open *Canarium* grove, by sea: *Kerr 16873* (BK).

DISTR. Pantropic.

39. *F. SERICERA* R. Br., Prodr.: 228. 1810; F.B.I.: 641; F. KC.: 86; Mat. F.M.P.: 94; Hoss. 1910: 462; F.I.C.: 111; Turr.: 425; F.M.P.: 157; Kill.: 56. — *F. junciformis* var. *latifolia* (non Clarke) F.I.C.: 120.

C. — Bangkok, strand: *Mareau 2432* (SING).

S.W. — Prachuap, on sandy sea shore: *Kerr 19729* (BK).

Songkhla, in open sandy ground near sea: *Kerr 15681* (BK); Songkhla, Tupa, in sand of beach: *Kerr 14681* (BK).

DISTR. S. and S. E. Asia, through Malaysia to Australia.

40. *F. ORTUSATA* (Clarke) Ridl., Fl. Mal. Pen. 5: 157. 1925; Kern, Biunea 8: 116. 1955. — *F. tenera* R. & S. var. *?obtusata* Clarke, Fl. Br. Ind. 6: 612. 1893; Mal. F.M.P.: 94. — *F. nigrobrunnea* Thwaites var. *thorelii* Camus, Not. Syst. 1: 248. 1910; F.I.C.: 121, p.p.

PEN. — Surut, Kantuli: *Put 4297* (BK).

DISTR. Lower Bengal, Lower Birma, N. W. Malaysia.

41. *F. GLOBULOSA* (Retz.) Kunth, En. 2: 231. 1837; F.B.I.: 644; Mat. F.M.P.: 95; F.I.C.: 424; Turr.: 424; F.M.P.: 158; Kill.: 56; Koy. 1957: 45. — *Scirpus globulosus* Retz., Obs. 6: 19. 1791.

N. — Phetchabun, Lomkau, Phu Hee, common in moist localities in deciduous forest 860 m: *Swinhoei* 2600 (L.).

S.W. — Chumphaw, Bang Son: *Pet* 1509 (BK).

PEN. — Surat, Kantali: *Pet* 4128 (BK); Praseang, abundant in open marshy ground 50 m: *Kerr* 12400 (BK).

Trang, Kantang, common in swamp, under 50 m: *Swinhoei* 2051 (*RFD* 12400) (L.).

Songkha, Tapa, in wet ground, under 50 m: *Kerr* 15713 (BK).

Pattani, Bukit, in open marshy ground, under 50 m: *Kerr* 7133 (BK); Bana

Sia, on dried mud in open ground, 50 m: *Kerr* 7803 (BK).

Narathiwat, Sungai Padi, Taloh Bukah, common in swampy ground, 125

Williams 17207 (*RFD* 11912) (BKF), 17227 (*RFD* 11913) (BKF).

DISTR. S. and S. E. Asia, Malaysia, Micronesia, Polynesia.

42. *F. MLIACEA* (L.) Vahl, En. 2: 287. 1806; F.B.I.: 644; F. KC.: 8; Will.: 225; Mat. F.M.P.: 95; Hoss. 1910: 462; Ridl. 1911: 222; F.I.C.: 17; Turcz.: 424; F.M.P.: 158. — *Scirpus miliaceus* L., Syst. Veg., ed. 10: 80 1759.

N. — Chainat, Manoran, common in rice-fields, under 50 m: *Kerr* 19074 (BK).

E. — Korat, Ban Chumseang, paddy field: *Nai Noe* 190 (BK).

C. — Bangkok, along railway line, under 5 m: *Kerr* 6721 (BK); at edge of dike local name *ya waei pladuk*: *Kerr* 19712 (BK).

S.E. — Chanturi, Mahkam, Ban Ang, common in wet localities, 120 m: *Bunnak* 212.

S.W. — Near Neekey, near Wangka, very common near pools, 150 m: *den Hoed* (Kraus *Nai R. basin exp.* 1946) (BK, L); marshy plain near Ku Jae, c. 150 m NW of Kanburi, 100—150 m: *Kontermans* 1321 (Kraus *Nai R. basin exp.* 1946) (BK).

PEN. — Surat, Bangbae, common by path, 50 m: *Phloenchit* 338 (*RFD* 14305) (L); *Swinhoei* 2330 (*RFD* 12865) (BKF).

Trang, Chawang, common by stream, 100 m: *Swinhoei* 3082 (*RFD* 16407) (L).

Pattani, Saihuai, in paddy fields, under 25 m: *Kerr* 7230 (BK).

Satun, heath: *Ridley* 14821 (BM, SING).

DISTR. Pantropic.

43. *F. SALBUNDIA* (Nees) Kunth, En. 2: 230. 1837; F.B.I.: 646. N.E. — Loi, Pin Krading, source of Nam Phawng, partly submerged: *Swinhoei* 5855 (*RFD* 31490) (L).

DISTR. India, Burma.

44. *F. ANISOCLADA* Ohwi, *Blumea* 8: 97, f. 2. 1955; Kern, *Blumea* 120. 1955; Koy. 1957: 47.

S.E. — Trat, Dan Chumpon, in open, marshy ground, under 50 m: *Kerr* 77852 (BK).

DISTR. Indo-China, Java, Celebes.

45. *F. PAUCIFLORA* R. Br., Prodr.: 225. 1810; F.B.I.: 633; Mat. F.M.P.: 90; F.I.C.: 98; F.M.P.: 154.

SE — Chanthuri, Makhiam, Ban Ang, common in wet localities in savannah, 120 m; local name *pañ-prang* var: *Bannak* 135 (L).

Trat, Kaw Chung, Khlawng Noen, common by paths in sandy soil, 5 m; *Smithsonian* 5647 (L).

PEN. — Pattani, open sandy ground, near sealevel: *Kerr* 7739 (BK).

DISTR. S. Asia, Malaysia, tropical Australia.

46. *P. LEPTOCLADA* Benth., Fl. Hongk.: 393. 1861; F.B.I.: 647; Mat. F.M.P.: 96; Ridl. 1911: 222; F.I.C.: 118; F.M.P.: 159. — *P. disticha* (non Boeck.) F.I.C.: 125.

PEN. — Nakorn Srithumarat, Padang Besar, in light evergreen forest, 50 m: *Kerr* 6593 (BK).

Siam, heath: *Hidley* 15319 (BM, K, SING).

DISTR. Ceylon, Indo-China, S. China, Malaysia.

47. *P. MONOSTACHYOS* (L.) Hassk., Pl. Jay. Rar.: 61. 1848; F.B.I.: 649; Ridl. 1911: 224; F.I.C.: 122; Turr.: 424; F.M.P.: 159. — *Cyperus monostachyos* L., Mant. 2: 180. 1771.

N — Chhengnai, Muang Payao: *Put* 3357 (BK).

NE. — Loel, Sithan, common in deciduous forest, 300 m; *Smithsonian* 5792 (L).

Nakorn Panom, Dawn Tan, in open deciduous forest, 100 m: *Kerr* 21528 (BK).

E. — Korat, Ban Yai: *Put* 4276 (BK).

C. — Saraburi, Menam Sak, mixed deciduous forest, 40 m: *Kerr* 7022 (BK).

SW — Kanburi, Ta Salao, in bamboo forest, 50 m: *Kerr* 19475 (BK).

Prachuap: *Put* 229 (BK); Prachuap, Hui Yang: *Put* 3179 (BK); Sam Roi Yawt, common in open scrub on sandy ground, under 50 m: *Kerr* 19959 (BK).

CFN. — Surat, Kanchanadit, in wet ground by stream, evergreen forest, 5 m: *Kerr* 12123 (BK); Kaw Samui, on sandy ground in coconut plantation, near sealevel: *Kerr* 12583 (BK).

DISTR. Pantropic.

48. *P. ERAGROSTIS* (Nees) Hance, Journ. Linn. Soc., Bot. 13: 132. 1873; Turr.: 424; Key. 1957: 38. — *Abildgaardia eragrostis* Nees & Mey. ex Nees in Wight, Contr. Bot. Ind.: 95. 1834. — *P. tortispica* Turr., Kew Bull. (1911): 343. 1911; Turr.: 425; F.I.C.: 125.

NE. — Loel, Phu Krading, common in savannah on rocks, 1300 m: *Smithsonian* 1943 (L); Wang Saphung, Sithan, common along edge of paddy field, 300 m: *Dev 3 (RMP 5638)* (BK); Kao Krading, open grassy ground, 1200 m: *Kerr* 5984 (BK). Sulon, Wa Nawt, in open grassy ground, 200 m: *Kerr* 8477 (BK).

SE. — Trat, Kao Kuap, in light evergreen forest, 600 m: *Kerr* 17759 (BK).

SW — Kanburi, Kao Tawng, in open, grassy, deciduous forest, 100 m: *Kerr* 19776 (BK, K).

Kanburi, common in open deciduous forest, under 50 m: *Kerr* 9037 (BK, K).

Lingnan, Takao: *Put* 1938 (BK).

Surat, open spaces in scrub, under 10 m: *Kerr* 12351 (BK, K); Kantull: *Put* 1779 (BK).

Songkhla, Ban Prakawp, on sandy soil in light evergreen forest, 50 m: *Kerr 15828* (BK, K).

DISTR. S. Asia, extending northwards to S. China and Formosa, southwards to Queensland.

49. *F. CINNAMOMETORUM* (Vahl) Kunth, En. 2: 229. 1837; Kern: 645. — *Scirpus cinnamometorum* Vahl, En. 2: 278. 1806. — *F. cyperoides* R. Prodr.: 228. 1810; F.B.I.: 650. — *F. cyperoides* R. Br. var. *cinnamometorum* (Vahl) Clarke, Fl. Br. Ind. 6: 650. 1893; Turr.: 423.

N. — Phetchabun, Lamkoo, Phu Hee, common in oak forest, 860 m: *Smithson 2595*.

N.E. — Loei, Phu Krading, Rest House, in savannahs, 1300 m: *Smithson 5948*.

Nakawn Panom, Muk Dahan, in open deciduous forest, 200 m: *Kerr 21451* (BK).

E. — Srisuket, Kanchanadit, in open scrub jungle near village, 200 m: *Smithson 4934* (L).

S.E. — Chanturi, Makhum, along edge of thickets, 20 m: *Smithson 5757* (L).

Trat, Huay Rasong, Dong Madue, common among grasses in rice-field, near 50 m: *Smithson 1331* (RFD 6772) (BK).

S.W. — Phetchaburi, Tung Luang, in open sandy ground, under 50 m: *Kerr 20642* (BK).

PEN. — Surat, Kanchanadit, common in savannah, 5 m: *Kerr 13067* (BK, K).

Satun, in savannah, 5 m: *Kerr 13600* (BK).

DISTR. From S. E. Asia to tropical Australia.

50. *F. ADENOLBIFIS* Kern, Blumea 8: 123, f. 3. 1955; Kern: 645.

S.E. — Prachinburi, Aran Prathet, in open low-lying, grassy ground, 50 m: *Kerr 19560* (BK, K).

PEN. — Surat, Kun Tale Lake: *Soldenaden 3326* (SING).

DISTR. Also known from Indo-China and Malaysia (Kangean Island).

51. *F. SAVANNICOLA* Kern, Blumea 10: 635. 1960.

N.E. — Loei, Phu Tong, in savannah, 1160 m, local name *ya nang*: *Kerr 2522* (type: BK).

DISTR. Only known from the type collection.

52. *F. FUSCOPES* Clarke in Ostenf., Bull. Herb. Boiss., sér. 2, 5: 7. 1905; Hoss. 1910: 462; F.I.C.: 124 (specim. Siam); Turr.: 424; F.M.P.: 1. Kern, Blumea 8: 125. 1955; Kern: 647. — *F. angustifolia* Ridl., Journ. Br. Roy. As. Soc. no 59: 223. 1911. — *F. erythrodemia* Camus, Not. S. 1: 247. 1910; F.I.C.: 113.

N.E. — Loei, Kaa Krading, on open sandy ground, 1200 m: *Kerr 5072* (BK).

Krading, common on rocks in savannah, 1300 m: *Smithson 1037* (L).

C. — Nakawn Nayok, Khao Lun, wet place: *Saravabandha s.n.* (BK).

S.E. — Chanturi, Makhum, common in the plain, 20 m: *Smithson 5541* (RFD 21) (L).

PEN. — Pattani, on open sandy ground, near sealevel: *Kerr 7748* (BK, SING).

Sand, sandy places on heaths: *Ridley 14822* (type collection of *Fimbristylis unguiculata* Ridl.) (BM, K, SING).

DISTR. Also in Cochinchina and W. Malaysia (Malay Peninsula, Billiton, Labuan Island).

53. *F. FUSCA* (Nees) Clarke, Fl. Br. Ind. 6: 649. 1893; Willd.: 225; Mat. F.M.P.: 97, p.p.; Hoss. 1910: 461; 1911a: 372; 1911b: 370; F.I.C.: 123; F.M.P.: 160, p.p.; Kern: 647. — *Abildgaardia fusca* Nees in Wight, Contr. Bot. Ind.: 95. 1854. — *F. subfusca* Camus, Not. Syst. 1: 248. 1910; F.I.C.: 123. — *F. rigidifolia* Ridl., Journ. Str. Br. Roy. As. Soc. no 59: 223. 1911; F.M.P.: 159.

N — Lampang, Ngao, Mae Huat, common in deciduous forest, 360 m: *Arnold 57* (RFD 11275) (L).

N.E. — Loei, Phu Kradung, common in open pine forest, local name *guk bai bit*: *Dee 127* (RFD 1608) (L); same locality, in savannah, 1300 m: *Smithland 5857* (RFD 21467) (L), 5949 (L).

E — Krabi, Aranya, in deciduous forest, under 50 m: *Kerr 19304* (BK).

Chanhuri, Mukham, common in thickets, 20 m: *Smithland 3755* (L).

S.W. — Kanburi, Pa-Chan-sul, in mixed forest: *Burman 834* (L).

PIN. — Trang, Sikao, on sandy soil in light evergreen forest, under 50 m: *Kerr 19026* (BK).

Patulong, Sak, in savannah, under 50 m: *Kerr 19259* (BK).

Songkhla, Tapa, in savannah, under 50 m: *Kerr 14710* (BK).

Satol, in savannah: *Kerr 13659* (BK); Satol, heaths: *Ridley 14877* (type collection of *Fimbristylis rigidifolia* Ridl.) (K, SING).

DISTR. From India to S. China, Japan, and Malaysia.

54. *F. FIMBRISTYLOIDES* (F. v. M.) Druce, Rep. Bot. Exch. Cl. Br. Isl. 1916: 623. 1917. — *Abildgaardia fimbristylodes* F. v. M., Fragm. Phyt. Austr. 8: 273. 1874. — *F. loei* Turr., Kew Bull. (1911): 343. 1911.

E. — Korat, Ban Chamsaeng: *Nai Nae 195* (BK, K).

DISTR. Burma, Riu Kiu Islands, S. Korea, Malaysia, tropical Australia.

55. *F. STRAMINEA* Turr., Kew Bull. (1911): 192. 1911; Turr.: 425; F.I.C.: 124. — *F. nigrobrunnea* Thwaites var. *thorelii* Camus, Not. Syst. 1: 243. 1910, p.p.; F.I.C.: 121, p.p.

N — Chiangmai, Doi Suthep, 550—600 m: *Kerr 832* (type) (K); same locality, common in dry gravelly soil in dry deciduous forest, 700 m: *Smithland 3993* (RFD 16098) (BK, L).

DISTR. Tonkin, Cochinchina.

56. *F. DISTICHA* Boeck., Linnaea 38: 393. 1874; F.B.I.: 651; Kern: 645. — *F. fuscoides* (non Clarke) F.I.C.: 124 (specim. Cochinch.).

C. — Nakhon Nayok, on the way to Nang Nawang, in rocky ground, 100 m: *Smithland 6083* (L).

PEN. — Satul, in open sandy ground, 5 m: *Kerr 18733* (BK).

DISTR. Burma, Cochin-China, Tenasserim and Andamans, S. China, Sumatra.

57. *F. THOUARSII* (Kunth) Merr., *En. Philip. Fl. Pl.* 1: 127. 1923. *Arthrostylis thouarsii* Kunth, *En.* 2: 284. 1837. — *Arthrostylis filiformis* Thwaites, *En. Pl. Zeyl.* 352. 1864. — *Actinoschoenus filiformis* (Thwaites) Benth. in Hook., *lc. Pl.* 14: 33, t. 1346. 1881; *Mat. F.M.P.* 84; *F.M.P.* 165. *F. actinoschoenus* Clarke, *Fl. Br. Ind.* 6: 650. 1893.

N. — Chiengmai, Doi Nang Ka; *Poi 3440* (BK).

N.E. — Loei, Phu Krading, Thuen Saw, on loose sandy soil in dry evergreen forest, 1300 m: *Smithwood 393 (RFD 3886)* (BKF); Kao Krading, in open ground, edge of evergreen forest, 1200 m: *Kerr 3704* (BK).

S.E. — Trat, Kao Kuap, in open grassy ground, 700 m: *Kerr 17788* (BK).

PEN. — Ranawang, Kao Pawta Luang Ken, in open ground on ridge, 1300 m: *Kerr 16648* (BK, L).

Phang-nga, Kao Katakwan, on open ground, 1000 m: *Kerr 18184* (BK).

Songkhla, Kao Kao, in rock crevices on open rocky slopes, 300 m: *Kerr 15130* (BK, L).

Satul, Adang, in open rocky ground, 600 m: *Kerr 14130* (BK).

DISTR. Madagascar, Mauritius, Ceylon, Indo-China, S. China, Malay.

58. *F. YUNNANENSIS* Clarke, *Journ. Linn. Soc., Bot.* 36: 247. 1903; *Tunb.* 425; *Kern:* 648.

N. — Mae Hawng Sawm, common in rocky ground in dry *Dipterocarpus* forest, 500 m: *Smithwood 4019* (L).

Chiengmai, Doi Suthep, common in gravelly soil in dry deciduous forest, 600–700 m: *Smithwood 3887 (RFD 16687)* (BKF, L); Me Tun, open grassy pine forest, 1100 m: *Kerr 6248* (BK).

DISTR. Yunnan.

59. *F. HOOKERIANA* Boeck., *Linnaca* 37: 22. 1871; *F.B.I.* 641; *F. K.* 87; *Willd.* 225; *Hoss.* 1910: 462; *F.I.C.* 111, f. 16, 10–11; *Kern, Blum. Suppl.* 4: 165. 1958.

N.E. — Loei, Phu Krading, Rest House, common by paths, 1300 m: *Smithwood 5119* (L); in savannah on rocks, 1300 m: *Smithwood 1949* (BKF, L); in open pine forest, local name *pak hoe bew*: *Deo 148 (RFD 4904)* (BKF, L); Phu Krading, Phu Mah Duk, common in open pine forest, 1300 m: *Dit 10 (RFD 3582)* (BKF).

E. — Korat, Katok, on rocky ground in open forest, 300 m: *Kerr 8147* (BK).

S.E. — Trat, Kao Kuap, on rocks, 300 m: *Kerr 17880* (BK); grew at Bangkok in 1890, brought from Kao Kuap: *Kerr 19783* (BK, K).

Kaw Chang, Khlawng Khui, on open rocky ground, 50 m: *Kerr 6245* (BK).

PEN. — Songkhla, Kao Kao, in rock crevices in open rocky ground, 100 m: *Kerr 15130* (BK, K).

DISTR. Khasia Hills, Chota Nagpore, Indo-China.

50. *F. FERRUGINEA* (L.) Vahl, En. 2: 291. 1806; F.B.I.: 633; F. K.C.: 88, Will.: 224; Mat. F.M.P.: 92; Hoss. 1910: 461; F.I.C.: 108; F.M.P.: 576. — *Scirpus ferrugineus* L., Sp. Pl. 1: 50. 1753. — *F. polytrichoides* (non H. Br.) Mat. F.M.P.: 90, p.p.; F.M.P.: 154, p.p. — *F. longispica* (non Steud.) F.I.C.: 107.

var. *FERRUGINEA*.

- Bangkok, open low-lying ground by canal: *Kerr* 6779 (BK); Bangkok, Patanan, open ground flooded at high tide: *Kerr* 6797 (BK); Bangkok, Wat-Sing, ground inundated at high tide, under 5 m: *Kerr* 6797 (BK); Bangkok, Klong edge, sealevel: *Koyl Smith* 367 (BK).
- Kaw Chang, Khlawng Mayom, sandy ground close to sea: *Kerr* 6864 (BK, K), A.W. — Prachinap, Kao Tao, on open low-lying ground, under 5 m: *Kerr* 16182 (BK). Surat, Kaw Prap, among stones on beach: *Kerr* 13030 (BK, K); Kaw Samai, Ban Hua Tat, in *Pluchea* scrub, under 5 m: *Kerr* 15795 (BK, K). Satul, open ground at edge of mangrove forest: *Kerr* 11243 (BK).
- DISTR. Pan-tropic.

var. *SIEBOLDII* (Miq. ex Franch. & Savat.) Ohwi, Journ. Jap. Bot. 14: 576. 1936. — *F. sieboldii* [Miq., Cat. Mus. Bot. Lugd. Bat.: 118. 1870, nom. nud.] ex Franch. & Savat., En. Pl. Jap. 2: 118. 1879.

S.E. — Trat, Kaw Chang, Khlawng Nonsi, by path in sandy soil, 5 m: *Smithsonian* 550 (L).

DISTR. Japan, Korea, Riu Kiu Islands.

51. *F. TRISTACHYA* R. Br., Prodr.: 226. 1810; Kern. Blumea 8: 131. 1955. — *F. arvensis* Camus, Not. Syst. 1: 245. 1910; F.I.C.: 95. — *F. allei-*
smithii Camus, Not. Syst. 1: 291. 1910; F.I.C.: 112. — *F. podocarpa* (non Nees) Ridl. 1911: 222; F.M.P.: 155.

S.E. — Chanthel, Maham, common in wet localities in the plain: *Hemsl.* 174 (RFD 3216) (L), *Smithsonian* 5756 (L).

- Trat, Huay Raeng, Dong Maduae, in rice-fields, under 50 m, local name *gub hung* m: *Smithsonian* 1333 (RFD 6774) (BKF). Chumphaw, Ban Tang Maha, in open low-lying ground, near sealevel: *Kerr* 11400 (BK, K); Bang Son: *Por* 1542 (BK).
- SEN. — Surat, Kauchanadit, common in savannah, 5 m: *Kerr* 18088 (BK, K), Pathong, Sak, in savannah, under 50 m: *Kerr* 10257 (BK). Bangkok, Tepu, in savannah, under 50 m: *Kerr* 13713 (BK).

Satul, hunting: *Ridley* 14878 (BM, K, SING).

DISTR. From India to Micronesia and Australia.

52. *F. SCHOENOIDES* (Retz.) Vahl, En. 2: 285. 1806; F.B.I.: 634; Mat. F.M.P.: 90; F.I.C.: 99; Turcz.: 424; F.M.P.: 154; Koy. 1957: 44. — *Scirpus schoenoides* Retz., Obs. 5: 14. 1789.

S.E. — Mahara, common in the plain, 20 m: *Smithsonian* 5771 (L).

Trat, common in lawn: *Smithsonian* 5729 (RFD 21506) (L).

PEN. — Surat, edge of pool in open grassy ground, under 10 m: *Kerr 11245* (BK).
DISTR. From S. E. Asia to tropical Australia.

63. *F. SUBALATA* Kern, *Blumea* 8: 133, f. 2. 1955. — *F. alata* Camus, *Not. Syst.* 1: 244. 1910, p.p.; F.I.C.: 94, p.p.

PEN. — Surat, Kauchanadit, in savannah, 5 m: *Kerr 14142* (BK, K, L).

DISTR. Also known from Cochinchina, Cambodia, and New Guinea.

64. *F. DICHOTOMA* (L.) Vahl, *En.* 2: 287. 1806. — *Scirpus dichotoma* L., *Sp. Pl.* 1: 50. 1753. — *Scirpus diphyllus* Retz., *Obs.* 5: 15. 1789. *F. diphylla* (Retz.) Vahl, *En.* 2: 289. 1806; F.B.I.: 636; F. KC.: 85; W. 224; Mat. F.M.P.: 91; Hoss, 1910: 461; 1911b: 370; F.I.C.: 103; Turr. 4 F.M.P.: 155. — *F. annua* R. & S., *Syst. Veg.* 2: 95. 1817; Kill.: 56. — *F. loeispice* (non Steud.) Mat. F.M.P.: 93, p.p.; F.M.P.: 156, p.p. — *F. germus* Camus, *Not. Syst.* 1: 246, 1910; F.I.C.: 105.

N. — Chiangmai, Doi Suthep, common in dry deciduous forest, 750 m: *Smithland 1438* (L); same locality, in moist ground, 1100 m, local name *puh uia na*: *Sorvald 4318* (RFD 4318) (BKF); Me Awn, along edge of open stream, 450 m: *Kerr 4703* (L).
N.E. — Loei, Phu Krading, in open pine forest, 1300 m: *Dee 38* (RFD 3603) (L); same locality, in savannah, 1300 m: *Smithland 1438, 5950* (L).

Nakawn Panom, Dawn Tan, in open deciduous forest, 100 m: *Kerr 21524* (L).

C. — Nakawn Nayok, on the way to Nang Nawng, in rocky ground and by water, 100 m: *Smithland 4052* (L).

Bangkok, edge of open canal: *Kerr 6983* (BK).

S.E. — Kaw Chang, Khlawng Nonsi, in open, rather marshy ground, under 10 m: *Kerr 9260* (BK).

S.W. — Near Neeckey, near Wangka, in meadow, in half shade, 150 m: *den Hard 1440* (*Kuwa Noi R. basin exp. 1946*) (BK, L); near Rintin, near Kin Sayok, c. 140 m NW of Kanburi, mixed forest in marshy places on limestone rock, 100—150 m: *Kustermans 1238* (*Kuwa Noi R. basin exp. 1946*) (L); Ku-Jue, c. 150 km NW of Kanburi, hilly, dry country, 100—150 m: *Kustermans 1279, 1320* (*Kuwa Noi R. basin exp. 1946*) (L).

Chumphawu, Bang Son, in savannah, 100 m: *Kerr 15341* (BK, K).

PEN. — Surat, Banghao, common in evergreen forest in sandy soil, 50 m: *Phloer 367* (RFD 14419) (L); Kaw Samui, on open rocks by stream, 50 m: *Kerr 15736* (BK); Kaw Samui, Ban Bus Pat, in open grassy scrub: *Kerr 15736* (BK, K).
Phang-nga, Nop Pring, in sandy scrub, 100 m: *Kerr 18517* (BK).

Trang, Chawng, on open rocks by stream, 100 m: *Kerr 15189* (BK); Huay Y.

Khao Kaew, common in old clearing, 100 m: *Smithland 5121* (L); Kanchang, on swamp and muddy bank, under 50 m: *Smithland 2953* (RFD 12630) (L); Songkhla, Khao Noi, in gravelly ground on ridge, 40 m: *Williamson RFD 12630* (BKF).

Satun, Kuan Pa, by road-side, 20 m: *Kerr 14763* (BK).

DISTR. All warmer parts of the whole world.

65. *F. BISUMBELLATA* (Forsk.) Bub., Dodec.: 30. 1850. — *Scirpus bisumbellatus* Forsk., Fl. Aeg.-Arab. 1: 15. 1775. — *F. dichatoma* (non Vahl) P.B.I.: 635; Hoss. 1910: 461; 1911b: 370; F.I.C.: 102, p.p.; Turr.: 424.

N. — Mae Hawng Sawm, Pung Ma, Nam Pui, in stream bed, 460 m; *Smithsonian 4695* (L).
N.E. — Nungkai, Chalyaburi, on sand-bank, 200 m; *Kerr 26697* (BK).

Nakwon Panom, Paknam Songkram, on sand-bank in river, 200 m; *Kerr 21355* (BK).

C. — Sakaburi, Menam Sak, on muddy river bank, 30 m; *Kerr 2054* (BK).

N.W. — Kanburi, Wang Kang, on gravel bar at edge of river, under 50 m; *Kerr 18872* (BK).

Near Neekey, near Wangka, near rivers and pools, sandy soil, 150 m; *den Hoed 160* (*Kew Nat R. basin exp. 1946*) (BK, L).

DISTR. From the Mediterranean region through the Old World Tropics to N. S. Wales.

66. *F. MERRILLI* Kern, Blumea 8: 135. 1955. f. 6; Kern: 648.

S.E. — Prachinburi, Aran Prathet, in open low-lying grassy ground, 50 m; *Kerr 16372* (BK, K).

DISTR. Also known from S. China and Malaysia.

67. *F. TRICHOPHYLLA* Ridl., Fl. Mal. Pen. 5: 155. 1925; Kern, Blumea 8: 140. 1955; Kern: 648.

In Thailand:

var. *ERECTA* Holtt. ex Kern, Blumea 8: 141. 1955.

P.N. — Longshan, Tako, in clefts of limestone rocks, 100 m; *Kerr 11876* (BK).

Suzai, Ban Kawn Kep, in crevices of limestone rocks, 100 m; *Kerr 12177* (BK).

DISTR. The var. *trichophylla* is only known from Pulu Langkawi, var. *erecta* occurs also on limestone rocks in the Malay Peninsula.

68. *F. RIGIDULA* Nees in Wight, Contr. Bot. Ind.: 99. 1834; F.B.I.: 640.

S. — Kumpang Pet, Me Lannung, open grassy ground, 800 m; *Kerr 6104* (BK).

N.W. — Burmese border, Tripagodas, c. 40 km N of Wangka, scattered in grassy vegetation on sandy clay, 280 m; *Wickham 332* (*Kew Nat R. basin exp. 1946*) (BK, L).

DISTR. From India to China and the Philippines.

69. *F. SPICIGERA* Kern, Blumea 8: 144, f. 8. 1955.

N.E. — Nakwon Panom, Paknam Songkram, on sand-bank in river, 200 m; *Kerr 21369* (K, type; BK, L).

DISTR. Only known from the type collection.

70. *F. PSAMMOPHILA* Kern, Reinw. 4: 96. 1956. — *F. arenicola* Kern, Blumea 8: 146. 1955, non Wiggins 1950.

N.E. — Nakwon Panom, Paknam Songkram, on sand-bank in river, 200 m; *Kerr 21367*, type collection (BK, K, L).

DISTR. Only known from the type collection.

71. *F. NEMESII* Kern, Act. Bot. Neerl. 7: 800. 1958. — *Tylosa cylindrostachya* Nelmes, Kew Bull. (1949): 139. 1949, non *F. cylindrostachya* Steud. 1855.

S.W. — Brangkasi, on sand-bank in river, rather rare, 159 m: *des Hout & Kostermans* 668 (*Huac Noi R. basin exp. 1950, type collection*) (L).

DISTR. The species is also in Laos: Hat Kam, Wiengchan, on gravel by river, 200 m: *Kerr 21293* (L), and in Tonkin: prov. de Sontay, between the Rivière-Noire entre Van Yen et Van Bu, sur le sable, commun: *E. C. 4055* (Raymond in litt.).

72. *F. JUCUNDA* (Clarke) Kern, Blumea 10: 637. 1960. — *Cyperus jucundus* Clarke, Kew Bull. add. ser. 8: 3. 1908. — *F. brunnea* Clarke & E. G. Camus, Not. Syst. 1: 248. 1910; F.I.C.: 106.

N.E. — Nakawn Panom, Paknam Songkram, on sand-bank in river, 200 m: *Kerr 21294* (BK).

DISTR. Tonkin, Laos.

73. *F. BRUNNEOIDES* Kern, Blumea 8: 146, f. 10. 1955.

N.E. — Nakawn Panom, Paknam Songkram, on sand-bank in river, 200 m: *Kerr 21295* (K, type; BK, L).

DISTR. Only known from the type collection.

74. *F. GRIFFITHII* Boeck., Flora 43: 241. 1860; Kern, Blumea 8: 146, f. 11. 1955. — *F. aestivalis* (non Vahl) Mat. F.M.P.: 92; F.M.P.: 155. — *F. dielsii* (non Vahl) F.I.C.: 102, p.p.

E. — Kerat, Katak, on sandy bank by river, 200 m: *Kerr 21296* (BK, K).

S.W. — Champhuan: *Hemff & Nae SF 4383* (K, SING).

DISTR. Bengal, Burma, Tenasserim and Andamans, Indo-China, Malaysia.

75. *F. AESTIVALIS* (Retz.) Vahl, En. 2: 288. 1806; F.B.I.: 637; Hoss. 15460; 1911b: 370; F.I.C.: 106; Turcz.: 423; Kill.: 56. — *Scirpus aestivalis* Retz. Obs. 4: 12. 1786.

E. — Kerat, Ban Chumsaeng: *Pot 2787* (BK).

PEN. — Surat, Ta Reng Chang, on sand-bank in river, under 50 m: *Kerr 12319* (BK).

DISTR. S. and E. Asia, Malaysia, tropical Australia.

76. *F. SQUARROSA* Vahl, En. 2: 289. 1806; F.B.I.: 635; F.I.C.: 101, f. 3—6.

In Thailand:

var. *ESQUARROSA* Makino, Bot. Mag. Tokyo 17: 47. 1903. — *F. var. esquarrosa* Br., Prodr.: 227. 1810.

E. — Srissaket, Kantharom, common along river bank, 250 : *Smitinand 602* (BK).

E. — Chanturi, Mukham, near water, 20 m: *Smitinand* 5746 (L.).

DISTR. *F. squarrosa* is pantropic; var. *esquarrosa* is known from tropical Africa, Indo-China, Japan, Malaysia, Polynesia, and Australia.

Fimbristylis squarrosa is very near to *F. aestivalis* (Retz.) Vahl: Type *F. squarrosa* is characterized by the long recurved awns of the glumes, in var. *esquarrosa* the glumes are mucronate and the mucros as short as those of *F. aestivalis*; So the long pendent hairs of the style-base (absent or very short in *F. aestivalis*) are the only reliable character to distinguish *F. squarrosa* var. *esquarrosa* from *F. aestivalis*. In *Smitinand* 5746 the hairs are shorter than usual.

Koyama (1957: 44) thinks that there is a clear line of demarcation between the areas of *F. squarrosa* and *F. velata*, the former being an Oceanic continental species, the latter occurring in Malaysia and Australia. I cannot agree with him.

77. *F. GRACILENTA* Hance, Journ. Bot., London 6: 89. 1868; F.I.C.: 103; Kern 647 — *F. thorelli* Camus, Not. Syst. 1: 246. 1910; F.I.C.: 105.

E. — Loi, Phu Krating, common on rocks in savannah, 1300 m: *Smitinand* 2947, 5835 (L.).

C. — Nakhon Nayok, on the way to Nang-Nawng, in rocky ground: *Smitinand* 2934 (L.).

E. — Chumphon, Bang Son, in savannah, 50 m: *Kerr* 21334 (BK).

DISTR. S. China, Indo-China, Sumatra.

var. *psilopoda* Kern, var. nov.

A type rhachi, pedunculis pedicellisque glabris differt.

E. — Nakhon Phanom, Dawn Tat, in open deciduous forest, 100 m: *Kerr* 21522 (BK; type).

The numerous specimens of *Fimbristylis gracilentia* I have seen were all characterized by the puberulous rays and raylets of the inflorescence, a feature of rare occurrence in *Fimbristylis*. In *Kerr* 21522, otherwise perfectly agreeing with typical *F. gracilentia*, the inflorescence is quite glabrous. This collection may therefore be the type of a new variety.

78. *F. ARGENTEA* (Rottb.) Vahl, En. 2: 294. 1806; F.B.I.: 640; Mat. F.M.P.: 93; F.I.C.: 110; F.M.P.: 157. — *Scirpus argenteus* Rottb., Progr.: 27. 1772.

FMK. — Sarat, Ta Rong Chang, on sand-bank in river: *Kerr* 22908 (BK).

DISTR. Mauritius?; S. E. Asia; also in the Malay Peninsula.

79. *F. POLYTRICHOMES* (Retz.) R. Br., Prodr.: 226. 1810; F.B.I.: 632; F. KU: 88; Willd.: 225; Mat. F.M.P.: 90, p.p.; Hoss. 1910: 462; F.I.C.: 96; F.M.P. 154, p.p.; Kill.: 56. — *Scirpus polytrichoides* Retz., Obs. 4: 11. 1786.

C. — Tachin, on rather sandy ground by sea: *Kerr* 8978 (BK, K); in swampy grove with *Sonneratia* sp., near sealevel: *Kerr* 16109 (BK).

DISTR. Tropical Africa, Asia, and Australia.

80. *F. ACUMINATA* Vahl, En. 2: 285. 1806; F.B.I.: 631. Mat. F.M.P.: 89; Ridl. 1911: 222; F.I.C.: 95; F.M.P.: 153. — *F. setacea* (non Benth.) F.B.I. 632, p.p.; Mat. F.M.P.: 89; F.M.P.: 153. — *F. nutans* Vahl var. *minor* Camus Fl. Gén. I-C. 7: 96. 1912.

S.E. — Near Sriracha, rice-fields. 20—30 ft: *Mrs Collins* 1559, 1608 (BK).

Trat, Husay Raeng, Dong Madue, common in rice-field, under 50 m; local name *phreung kleut noi*: *Smitinand* 1508 (RFD 6773) (BKP); Khlawng Yai, common along edge of thicket, under 10 m: *Smitinand* 248 (RFD 6252) (L).

S.W. — Chumphaw, Ban Thung Maha, in open, low-lying ground, near sealevel: *Kerr* 11502 (BK); Bang Son: *Pat* 1548 (BK).

PEN. — Langsuan, Na Sak, in open grassy ground, under 50 m: *Kerr* 11868 (BK); Phuket, Khaw Pok-Kasum: *Haniff & Nur SF* 3881 (SING).

DISTR. S. E. Asia, extending to the Lesser Sunda Islands, Borneo, and the Philippines.

Clarke and Ridley wrongly referred dwarfish specimens of *F. acuminata* to *F. setacea*, a species restricted to Australia and Eastern Malaysia.

81. *F. NUTANS* (Retz.) Vahl, En. 2: 285. 1806; F.B.I.: 632; Mat. F.M.P.: 89; F.I.C.: 96; Turr.: 424; F.M.P.: 154. — *Scirpus nutans* Retz., Obs. 4: 12. 1786.

E. — Surin, Sangka, in open marshy ground, 300 m: *Kerr* 8308 (BK).

PEN. — Ranawng, Kaw Chang, on sandy ground in *Melaleuca* forest, 5 m: *Kerr* 10000 (BK).

Pattani, on sandy ground, under 25 m: *Kerr* 7337 (BK).

Satun, in open marshy ground, forming an extensive growth, 5 m: *Kerr* 11738, 15739 (BK).

DISTR. India, Indo-China, S. China, Formosa, Riu Kiu Islands, Malaysia, tropical Australia.

82. *F. TETRAGONA* R. Br., Prodr.: 226. 1810; F.B.I.: 631; Mat. F.M.P.: 88; F.I.C.: 93; Turr.: 425; F.M.P.: 153.

E. — Surin, Sangka, 100 m: *Kerr* 8841 (BK).

DISTR. India, Indo-China, S. China, Formosa, Malaysia, tropical Australia.

83. *F. DIPSAEA* (Rottb.) Clarke, Fl. Br. Ind. 6: 635. 1893. — *Scirpus dipsaceus* Rottb., Descr. & Ic.: 56, t. 12, f. 1. 1773. — *Echinolytrum dipsaceum* (Rottb.) Desv., Journ. Bot. 1: 21, t. 1. 1808; F.I.C.: 130.

N. — Chlungmai, Me Ping Rapids: *Unpai* 73 (BK); Chulnat: *Pat* 2668 (BK).

N.E. — Nakawn Panom, Tat Panom, on sand-bank in river, 200 m: *Kerr* 21538 (BK).

C.—Dhonduri, Bang Plet, common in alluvial deposit around cultivated areas, under 5 m; *Switinand 82 (RFD 5273) (L.)*.

PEN.—Surat, Ta Rong Chang; on sand-bank in river: *Kerr 12009 (BK)*.

DISTR. Tropical Africa, S. and E. Asia, Malaysia.

X. BULBOSTYLIS Kunth

84. *B. Densa* (Wall.) Hand.-Mazz. in Karsten & Schenk, Vegetationsb. 20, 7: 16, 1930. — *Scirpus densus* Wall. in Roxb., Fl. Ind. 1: 231, 1820. — *Isalepis trifida* Nees in Wight, Contr. Bot. Ind.: 108, 1834. — *B. capillaris* var. *trifida* (Nees) Clarke, Fl. Br. Ind. 6: 652, 1893. — *B. capillaris* (non Clarke) F.I.C.: 127.

N.E.—Loei, Phu Krading, Rest House, in wet localities, 1300 m; *Switinand 3944 (L.)*.

DISTR. Tropical Africa, S. and E. Asia to China and Japan, Malaysia, tropical Australia.

85. *B. BARBATA* (Rottb.) Clarke, Fl. Br. Ind. 6: 651, 1893; Mat. F.M.P.: 77; Hoss, 1910: 462; 1911b: 369; Ridl. 1911: 222; F.I.C.: 126; Turr.: 425; Key, 1957: 7. — *Scirpus barbatus* Rottb., Progr.: 27, 1772; Ridl. 1915: 168. — *Stenophyllus barbatus* (Rottb.) Cooke, Fl. Bombay 2: 887, 1908; Kill.: 56. S.—Bue Hawngsawn, lawn, 400 m; *Switinand 4576 (L.)*.

Tak, 30 km N of Tak, common in dry deciduous forest, 100 m; *Switinand 3897 (L.)*.

S.W.—Kanchuri, in open deciduous forest: *Kerr 20492 (BK)*; Kanburi, Ta Taknaw, local name *ya waat mao*: *Pat 19 (BK)*.

Bathuri, in deciduous forest, 50 m, local name *ya waat mao*: *Kerr 20410 (BK)*.

Prachuap, Hua Hin, in sand by sea beach: *Kerr 13495 (BK)*; Hui Yang: *Pat 4177 (BK)*; Sam Roi Yawt, open sandy ground near sea, local name *ya waat mao*: *Kerr 20981 (BK)*; Kan Krudai: *Pat 2394 (BK)*.

P.S.—Surat, Kaw Tao, in rock cleft near sea: *Kerr 13014 (BK)*.

Samut, open sandy ground, 5 m: *Kerr 18742 (BK)*.

Patthal, open sandy ground, near seabevel: *Kerr 7240 (BK)*; Yala, open sand-bank in river: *Kerr 7726 (BK)*.

DISTR. Warm parts of the Old World; also in the southern U.S.A.

86. *B. PUBERULA* (Poir.) Clarke, Fl. Br. Ind. 6: 652, 1893; Mat. F.M.P.: 78; F.I.C.: 128, f. 17, 1—2; F.M.P.: 160. — *Scirpus puberulus* Poir. in Lamk. Ind. 6: 767, 1804. — *Scirpus setaceus* (non L.) F.I.C.: 132. — *Stenophyllus puberulus* (Poir.) Killip; Journ. Siam Soc. Nat. Hist. Suppl. 7: 57, 1927.

PHN.—Pattani, Ban Sai Kao, open sandy ground, 50 m: *Kerr 15024 (BK)*.

DISTR. Tropical Africa and Asia.

XI. CYPERUS L.

87. *C. DIGITATUS* Roxb., Fl. Ind. 1: 209, 1820; F.B.I.: 618; F.I.C.: 74; 3, 5—6. — *Mariscus sieberianus* var. *evolutior* (non Clarke) Mat. F.M.P.:

73, p.p.; Ridl. 1911: 221; F.M.P.: 149, p.p. — *C. elatus* (non L.) F.I.C.: 5 (incl. var. *laxus* Camus).

E. — Korat, Ban Chumaneng: *Nai Nac* 202 (BK).

C. — Bangkok, edge of open ditch in fruit garden: *Kerr* 8275; Bangkok, Bangkhen RFD Compound, under 10 m: *Smithson* 5412 (RFD 19742) (L).

S.W. — Kanburi, Hin Dat: *Pat* 105 (BK).

Brangkasi, along river-bank, 150 m: *den Haed & Kostermans* 695 (*Kwan Nai basin exp.* 1946) (L).

PEN. — Surat, Tassateng, Bandon River, along the river, 5 m: *Seidenfaden* 2118 (SING).

Nakawn Sythamarat, Kao Chum Tawng, in shallow ponds, under 50 m: *Seidenfaden* 11439 (BK).

DISTR. Pantropic.

88. *C. ELATUS* L., Cent. Pl. 2: 301. 1756; F.B.I.: 618; Mat. F.M.P.: 7; F.M.P.: 148; Kill.: 55. — *C. digitatus* (non Roxb.) Mat. F.M.P.: 71; F.M.P. 147. — *C. radiatus* (non Vahl) F.I.C.: 72, f. 9, 1—4.

C. — Bangkok, Klong, 5 m: *Eryl Smith* 100 (BK).

DISTR. S. and S. E. Asia, Malaysia.

89. *C. IMBRICATUS* Retz., Obs. 5: 12. 1789. — *C. radiatus* Vahl, En. 369. 1806; F.B.I.: 617; Mat. F.M.P.: 70; F.M.P.: 147; Turr.: 422.

N. — Mae Hwangawn, Pang Ma, Nain Poi, in streambed, 400 m: *Smithson* 4699 (L).

N.E. — Nakawn Panom, on sand-bank in river, 200 m: *Kerr* 21337 (BK), 21391 (BK).

C. — Angkawang, Ayuthia: *Savatahandhu* s.n. (BK).

S.W. — Kanburi, Brangkasi, river-banks, 150 m: *den Haed & Kostermans* 697 (*Kwan Nai R. basin exp.* 1946) (L).

DISTR. Pantropic.

90. *C. EXALTATUS* Retz., Obs. 5: 11. 1789; F.B.I.: 617. — *C. elatus* var. *macrocarpa* (non Clarke) F.I.C.: 72.

S.W. — Petchaburi, the common species in stagnant water of open ditches, 10 m: *Seidenfaden* 11085 (BK).

DISTR. Tropical Africa, S. and E. Asia, Australia.

91. *C. STOLONIFERUS* Retz., Obs. 4: 10. 1786; F.B.I.: 615; Mat. F.M.P. 69; Ridl. 1911: 221; F.M.P.: 145. — *C. bulbosus* (non Vahl) F.I.C.: 64, but var. *elatus* Camus.

S.E. — Chantabun, Lam Sing, in rock crevices close to sea, near sealevel: *Kerr* 16187 (BK).

Trat, Kaw Chang, Khlawng Nong, in sand by sea, 5 m: *Smithson* 5951 (L).

S.W. — Prachinburi, Hua Hin, in sand by sea: *Kerr* 16118 (BK).

Kaw Tan, in sandy ground by sea: *Kerr* 16187 (BK), 11157 (BK).

PEN. — Kaw Samul, Ban Ban Put, in sandy ground near sea: *Kerr* 15760 (BKF).

DISTR. From S. E. Asia to Melanesia and tropical Australia.

92. *C. ROTUNDUS* L., Sp. Pl. 1: 45. 1753; F.B.I.: 614; Mat. F.M.P.: 68; Turr.: 1910: 459; 1911a: 372; 1911b: 370; Ridg. 1911: 221; F.I.C.: 66; Turr.: 1912 F.M.P.: 145; Kill.: 55.

92a — Patchaburi, Lam Kao, Phu Bi, common in damp localities, in village, 360 m: *Smitinand* 2590 (L).

92b — Mahawu Sawa, Wang Diao, savannah forest: *Hassane* 133a (BM, L).

92c — Bangkok, rice-fields: *Freiberg s.n.* (C); Krungthep, Bangkok, common in damp localities, under 10 m: *Smitinand* 1032 (RFD 10055) (L).

92d — Kanchuri, Wang Pra: *Pot* 24 (BK).

92e — Uraiburi, c. 100 km S of Wangka, along paths in half shade, 150 m: *den Haed & Kostermans* 935 (*Kuay Noi R. basin exp.* 1946) (BK, L).

92f — Pattani, Gopale-Panghan 556 (L).

DISTR. Warmer parts of the whole world.

var. *TUMIDUS* (Rottb.) Kük., Pflanzenr., Heft 101: 113. 1935.

92g — Bangkok, along ditches, local name *ya lukrap*: *Kerr* 10713 (BK); Bangkok, RFD Chaoprad, common in wet ground: *Smitinand* 4558 (RFD 17539) (L).

92h — Patchaburi, edge of open ditch, 10 m: *Kerr* 11683 (BK).

DISTR. of the subspecies. Widely spread in Africa and S. Asia.

93. *C. TRUNCULMIS* Boeck., Linnaea 36: 286. 1870; Kern, Reinw. 3: 193. 1934 — *C. rottingeri* (non Steud.) F.B.I.: 613; Mat. F.M.P.: 68; F.I.C.: 67 (7, 2—5; Turr.: 422; F.M.P.: 144.

93a — Chongmai, Dol Buhep, common in oak forest, 1100 m, local name *ya duk dang*: *Sorudet* 113 (RFD 1837) (BKF).

93b — Patchaburi, Lamkao, Na Phaw Sawng, common in pine and oak forest, 900 m: *Smitinand* 2032 (RFD 15186) (L); Lamkao, Phu Hoo, scattered in oak forest, 800 m: *Smitinand* 2593 (RFD 15137).

93c — —, Phu Krading, Rest House, in open pine forest, 1300 m: *Smitinand* 6613 (L); Phu Krading, *Savatahondhu* 212 (PNH).

93d — Mahawu Panom, Mok Dahan, in deciduous forest, 200 m: *Kerr* 21423 (BK).

93e — Chanchuri, Khilung, Map Phoo, common in wet localities in the plain, 130 m: *Denham* 318 (RFD 6523) (L).

93f — Samut, in scrub, under 10 m: *Kerr* 11262 (BK); Surat, Kantoli: *Pot* 3131 (BK).

DISTR. Tropical Africa, S. E. Asia to Micronesia and Australia.

94. *C. DISTANS* L.f., Suppl.: 103. 1781; F.B.I.: 607; Mat. F.M.P.: 69; Turr.: 60; Turr.: 422; F.M.P.: 145; Kill.: 55.

94a — Chongmai, Huay Khew, common in moist localities, 350 m: *Smitinand* 4758 (RFD 17840) (L).

94b — Bangkok, open waste ground recently cleared: *Kerr* 6990 (BK).

94c — Chanchuri, Manam Sak, on sand-bank with coarse grass (*Saccharum* sp.), 20 m: *Kerr* 1012 (BK, SING).

94d — Trut, Kaw Kut, in coconut plantation, 5 m: *Smitinand* 3700 (RFD 21567) (L).

94e — Kanchuri, Ta Saluo, in scrub on river bank, 50 m: *Kerr* 10532 (BK); Brangkasi, Santoung, open spaces, 150 m: *den Haed & Kostermans* 626 (*Kuay Noi R. basin exp.* 1946) (L).

Near Neekey, near Wangku, sand and gravel banks along Ran Ti River, 150 m; *den Haed 122* (*Krae Noi R. basin exp. 1946*) (BK, BO, L, PNH, SING); *ibid.*; *Blaubergeri 604* (L).

Prachuap, Pak Tawan, on sand-bank by river, 20 m; *Kerr 29527* (BK).

DISTR. Warmer parts of the whole world.

95. *C. NUTANS* Vahl, En. 2: 363. 1806; F.B.I.: 607.

C. — Saraburi, Muak Lek, sand-bank in stream, 200 m; *Marcus 1855* (BK).

Bangkok, in ditch in fruit garden; *Kerr s.n.* (BK).

Chubadan, Dong Pya Yen, in open marshy savannah, 100 m; *Kerr 8009* (BK).

S.E. — Chanturi, Pong Nam Rawn, Wang Kaphue, common by stream, 160 m; *Sri Sumat 3343* (BKP).

S.W. — Near Neekey, near Wangku, Ran Ti River, sandy river banks, 150 m; *den Haed 211* (*Krae Noi R. basin exp. 1946*) (L); near Klu Sayok, c. 120 km N of Kanburi, mostly dry limestone rocks in rivulet, 100 m; *Kaslermann 1186* (*Krae Noi R. basin exp. 1946*) (L).

Bangsuphan; *Keith 406* (SING).

DISTR. S. and S. E. Asia, Malaysia, ? W. Africa.

96. *C. PROCERUS* Rothb., Deser. & Ic.: 29. 1773; F.B.I.: 610; Mat. F.M.P. 70; F.I.C.: 62; F.M.P.: 140. — *Pycreus puncticulatus* (non Nees) Mat. F.M.P. 61; Ridl. 1911: 220; F.M.P.: 140. — *Pycreus baccha* (non Nees) F.I.C.: 61. C. — Bangkok, on bank of open canal; *Kerr 6983* (BK); in flooded rice-fields; *den Haed 11101* (BK); local name: *koh takluk*; *Suntabaniha s.n.* (BK).

DISTR. Madagascar; from India, Cochinchina, E. China, and Formosa southward to Queensland.

97. *C. PILOSUS* Vahl, En. 2: 354. 1806; F.B.I.: 609; Mat. F.M.P.: 61; F.I.C.: 62, f. 6, 12; Turr.: 422; F.M.P.: 144; Koy. 1955: 207; 1957: 26.

S.W. — Near Neekey, near Wangku, on sandy soil along Ran Ti River, 150 m; *den Haed 139* (*Krae Noi R. basin exp. 1946*) (BK, L).

PEN. — Trang, Chawog, common by stream, 100 m; *Suntabaniha 3083* (L).

DISTR. From Central Asia and Japan through tropical Asia to N. Australia; tropical W. Africa.

98. *C. BABAKAN* Steud., Syn. 2: 6. 1855; Kern, Reinw. 2: 105, f. 1. 1952. — *C. babakensis* Steud. ex Miq., Fl. Ind. Bat. 3: 257. 1855; F.B.I.: 610; F.I.C.: 61; Turr.: 421; F.M.P.: 144.

S.E. — Kaw Chang, Lem Dan Kao, marshy ground by sea, 5 m; *Kerr 2287* (BK).

PEN. — Surat, Kanchanadit, pond in savannah, 5 m; *Kerr 12002* (BK).

Nakawn Srithamarat, Pathung Besar, in light evergreen forest, 50 m; *Kerr 10000* (BK, BO).

Songkhla, Kampungpet, in edge of marshy ground, under 50 m; *Kerr 15222* (BK).

Patani, Banang Sta, in rather marshy paddy fields, 50 m; *Kerr 7203* (BK).

DISTR. From Hindustan and Assam to Cochinchina and Malaysia.

99. *C. CORYMBOSUS* Rottb., Descr. & Ic.: 42, t. 7, f. 4. 1773; F.B.I.: 66; F.I.C.: 66 — *C. longus* (non L.) F.I.C.: 68.

100 — Lampang, Mae Paen, in marshy place, 160 m; *Winit* 1722 (BK, BKP).

101 — Pandanadhani, common in ditches by roadsides, under 50 m; *Swinton* 4530 (RFD 1950).

Bangkok, along open tidal canals: *Kerr* 6888 (BK); Bangkok, local name *koh chao lak* (shortabance): *Sawatbandhu* s.n. (BK).

102 — Chaisalma, cultivated, used for mat-making, under 50 m, local name: *koh*; *Kerr* 1952 (BK).

DISTR. Tropics and subtropics of the whole world.

Sometimes cultivated for matting purposes.

100. *C. MALACCENSIS* Lamk, Ill. 1: 146. 1791; F.B.I.: 608; Mat. F.M.P.: 1911: 221; F.I.C.: 63; Ridl. 1920: 124; F.M.P.: 147; Kill.: 55.

101 — Bangkok, along edge of open canal: *Kerr* 6888 (BK, SING); along ditch: *Kerr* 6875 (BK).

102 — Chantaban: *Vesterdal* 459 (C).

103 — Sarai, Haddon: *Seidenfaden* 2049 (SING).

Satun: *Bidley* 14829 (SING).

DISTR. Widely spread in the Eastern Hemisphere.

101. *C. TONKINENSIS* Clarke, Kew Bull. add. ser. 8: 11. 1908; Camus, Bot. Ser. 1: 241. 1910; F.I.C.: 70.

102 — Nakhon Phanom, Tai Phanom, on sand-bank in river, 200 m; *Kerr* 21527 (BK).

103 — Kankari, Wang Kanai, on gravel bar at edge of river, under 50 m; *Kerr* 12371 (BK).

DISTR. Also known from Tonkin (type locality).

Cyperus brevicaulis Clarke, Kew Bull. add. ser. 8: 11. 1908, was based on two Balansa collections (2832 and 2833). I am pretty certain that the duplicates of Balansa 2831, type collection of *C. tonkinensis*, and that of Balansa 2832, both in the Leyden Herbarium, represent but one species.

102. *C. ILLA* L., Sp. Pl. 1: 45. 1753; F.B.I.: 606; Mat. F.M.P.: 66; Ridl. 1911: 221; F.I.C.: 59, f. 6, 4—6; Turr.: 422; F.M.P.: 143; Kill.: 55.

103 — Nakhon Sawan, Chainai, Manorom, rice-field weed, under 50 m; *Kerr* 19673 (BK); Takli: *Pai* 2145 (BK); Muang Sing: *Pai* 2639 (BK).

104 — Lek, Phu Krading, swamp, 1300 m, local name *hangka khaww*: *Dry* 158 (RFD 279) (L); Ridl.: *Swinton* 1854 (L); *Swinton* 5858 (RFD 21492) (L).

105 — Nakhon Phanom, on sand-bank in river, 200 m; *Kerr* 21379 (BK), 21388 (BK).

106 — Bangkok, road side; *Kerr* 11003 (BK), 19227 (BK); Bangkok, open marshy ground; *Kerr* s.n. (BK); Bangkok, Klong side: *Eryl Smith* 1017 (BK).

107 — Angthuang, Ayuthia: *Pai* 2399 (BK).

108 — Kae Ching, Lam Dan Rao, open marshy ground by sea, 5 m; *Kerr* 9289 (BK).

S.W. — Kan Ti River, near Neeckey, near Wangka, along river banks, 150 m; *den Hood 206 (Kwai Noi R. basin exp. 1946) (BK, BO, G, L, PNH, SING)*.

DISTR. Tropical Asia to China and Japan, Malaysia, tropical E. Africa, Australia.

193. *C. COMPRESSUS* L., Sp. Pl. 1: 46, 1753; F.B.I.: 605; Mat. F.M.P.: 67; F.I.C.: 57, f. 5, 3—5; F.M.P.: 144.

C. — Paknam, in crevices of cement path, near sealevel: *Kerr 12946 (BK)*.

S.W. — Prachuap, Hua Hin, in open grassy, sandy ground, near sealevel: *Kerr 1211 (BK)*.

DISTR. Pantropic.

194. *C. FLABELLIFORMIS* Rotib., Progr.: 22, 1772.

C. — Bangkok, in stagnant water, local name *ya hok*: *Mareau 658 (SING)*, *Mareau 1224 (SING)*; in a fruit garden ditch, probably planted, under 5 m: *Kerr 100 (BK)*.

DISTR. Tropical Africa, elsewhere sometimes escaping from cultivation.

195. *C. DIFFUSUS* Vahl, En. 2: 321, 1806; F.B.I.: 603; Mat. F.M.P.: 67; Hess. 1910: 458; 1911a: 374; Ridl. 1911: 221; F.I.C.: 54; Turcz. 421; Bur. 1920: 124; F.M.P.: 142; Koy. 1955: 209; 1957: 27 (incl. var. *microstachya*).
N. — Lampang, Huay Luang, along edge of stream in evergreen forest, 140 m: *Pl. 1837 (BK, HKF)*.

Nakaon Sawan, Takli: *Pl. 2108 (BK)*.

E. — Korat, Lat Bua Kao: *Pl. 4215 (BK)*.

S.E. — Prachinburi, near Sriracha, 30 ft.: *Mrs Collins 1891 (BK)*; Nawng Pla: *Collins 846 (BK)*.

Trat, Koh Chang: *Einer Nielsen 724 (C)*.

S.W. — Kanburi, in deciduous forest, under 50 m: *Kerr 29557 (BK)*; To Salu, bamboo (*Bambusa arundinacea*) forest, 50 m: *Kerr 19655 (BK)*.

Near Kha Sayok, c. 120 km NW of Kanburi, bamboo thicket, mostly dry limestone rocks, 100 m: *Kostermann 1098, 1100 (Kwai Noi R. basin exp. 1946) (L)*; Neeckey, near Wangka, open dry place, 150 m, local name *neh gay song* (Lan language): *den Hood 131 (Kwai Noi R. basin exp. 1946) (BK, BO, L, PNH, SING)*; *ibidem 233 (BK, L)*; near Ka Tha Lai, in Pan Paung River valley, very common, bamboo grove, 300 m: *den Hood 928 (Kwai Noi R. basin exp. 1946) (L)*; Brangkasi, along paths, 150 m: *den Hood & Kostermann 157 (Kwai Noi R. basin exp. 1946) (L)*.

Prachuap, Kao Luang, common in evergreen forest, 300 m: *Kerr 10875 (BK)*; Pak Tawan, in bamboo forest: *Kerr 29521 (BK)*.

PEN. — Surat, Kaw Tao, glade in evergreen forest, 30 m: *Kerr 11176 (BK)*; *Kerr 12789 (BK, L)*.

Songkhla, Kaw Maew, shady places, 30 m: *Williams 17281 (RPD 8653) (BK)*; Satul, Adang, in evergreen glade, under 5 m: *Kerr 15085 (BK)*.

DISTR. From India to S. China and Malaysia.

var. *MACROSTACHYUS* Boeck., *Linnaea* 35: 534. 1868. — *C. pubisquamis* Steud., *Syn.* 2: 20. 1855; F.B.I.: 604; F.I.C.: 56, f. 57. — *C. diffusus* var. *pubisquamis* (Steud.) Hook. f. in Trimen, *Handb. Fl. Ceyl.* 5: 28. 1900; *Mat. F.M.P.*: 65; *Ridl.* 1920: 124; *F.M.P.*: 143.

NE — Nongkhal, Pon Pisai, in evergreen forest, 200 m: *Kerr 8554* (BK).

EE — Rayong, Ban Phae: *Pat 2779* (BK).

DISTR. As the species.

106. *C. TRIALATUS* (Boeck.) Kern, *Reinw.* 3: 32. 1954, f. 1, 2. — *Scirpus trianus* Boeck., *Flora* 42: 445. 1859. — *C. bancanus* Miq., *Fl. Ind. Bat.*, suppl.: 599. 1861; *Mat. F.M.P.*: 65; *Ridl.* 1911: 221; F.I.C.: 56, f. 5, 10; *F.M.P.*: 143; *Kill.*: 55. — *C. tergidulus* Clarke, *Journ. Linn. Soc.* 21: 130. 1884; F.B.I.: 604. — *C. helferi* (non Boeck.) F.I.C.: 55.

NE — Loi, Phu Kyding, Dawn Phu Kaew, scattered in evergreen forest, 1300 m: *Smithson 1964* (RFD 6466) (BK); Loi, Pu Tong, among rocks in open grassy forest, 1900 m: *Kerr 8872* (BK).

Nakawa Panum, Dong Bang-I, in evergreen forest, 200 m: *Kerr 21400* (BK).

SE — Saraburi, Monam Salt, in rocky limestone hill, 100 m: *Kerr 7041* (BK); Saraburi, Phu Khae Arboretum, common in dry evergreen forest, 30 m: *Smithson 2884* (L).

EE — Chantaboon: *Vanderdat 811* (SING); Chantaburi, Khlong, Map Phae, common in wet localities in the plain, 130 m: *Buruch 217* (RFD 2524) (L).

Ten, Kaw Chung, Khlaung Nonsi, in sandy soil, 5 m: *Smithson 4654* (RFD 2475) (L); Kaw Chang, Pak Khlawk, common in paddy fields and scrub forest, under 10 m: *Buruch 405* (RFD 12508) (L).

EE — Bangtaphan, jungle: *Keith 432* (SING); same locality, beach: *Keith 404* (SING).

PLS — Samut, in evergreen scrub, under 10 m: *Kerr 11264* (BK).

Sungkhin, Kaw Maew, gregarious in dry shady places, 30 m: *Williams 17275* (RFD 14021) (BK).

Sand; *Ridley 14837* (BM, SING).

Without exact locality, *Mrs Collins 849* (BK); *Kerr 4196* (P).

DISTR. Indo-China, S. China, W. Malaysia.

107. *C. HELFERI* Boeck., *Linnaea* 38: 360. 1874; F.B.I.: 604.

PLS — Rayong, Lam Lieng, on shingle-bank by stream, 10 m: *Kerr 16884* (BK).

DISTR. Burma, Pegu, Mergui, Tenasserim or Andamans.

108. *C. RADIANIS* Nees & Mey. ex Kunth, *En.* 2: 96. 1837; F.B.I.: 605; *Mat. F.M.P.*: 66; *F.M.P.*: 143; *Kill.*: 55. — *C. sinensis* Debeaux, *Act. Soc. Linn. Bord.* 31: 14. 1877, t. 12; F.I.C.: 52, f. 6, 1—3.

SW — Prachuap, Hua Hin, in sand by sea: *Kerr 12517* (BK), n.s. (BK).

PLS — Phuket, Lam Tu, in sand by sea: *Kerr 17390* (BK).

Sungkhin, open sandy ground near sea: *Kerr 15083* (BK).

DISTR. S. E. Asia to S. and E. China, Formosa, and W. Malaysia.

109. *C. DIFFORMIS* L., Cent. Pl. 2: 6. 1756; F.B.I.: 599; F.I.C.: 49, 1-2; F.M.P.: 142.

N.E. — Nawngkai, Chaiyaburi, on sand bank in Me Keng, 280 m; *Kerr 26700* (BK).

C. — Bangkok, rice-fields: *Feilberg s.n.* (C); Bangkok, Bangkok, RFD Compound near water, under 10 m; *Smithson 5413* (RFD 19741) (L); *Smithson 5454* (RFD 19837) (L).

Tachin, in swampy ground with *Saccolis* sp., near sealevel: *Kerr 16106* (BK).

Ayuthia, on damp mud at edge of river, 10 m; *Kerr 7007* (BK).

PEN. — Kaw Samui, Ban Saa Put, in low-lying scrub, under 5 m; *Kerr 16724* (BK).

DISTR. Tropical and warm temperate regions of the Old World. Australia; in C. America presumably introduced.

110. *C. PULCHERRIMUS* Willd. ex Kunth, En. 2: 35. 1837; F.B.I.: 600; Mat. F.M.P.: 64; Hoss. 1910: 459; 1911b: 370; Ridl. 1911: 221; F.I.C.: 47; Turr.: 422; F.M.P.: 142. — *C. siletensis* (non Nees) F.I.C.: 47.

S. — Phruet: *C. W. Franck 432* (C).

E. — Korat, Ban Chumsaeng, in paddy-field: *Nuri Nee 198* (BK).

C. — Chaiyaburi, Dong Pua Yen, damp mud in mixed forest, 50 m; *Kerr 7994* (BK). Bangkok, edge of open ditch in fruit garden: *Kerr 5976* (BK); Bangkok, Bangkok: *Unpat 112* (BK).

S.E. — Chantaburi: *Venterdal 489* (C, SING).

S.W. — Kanburi, Ta Salao, marshy ground in bamboo (*Bambusa acutidulacifolia*) forest, 50 m; *Kerr 16532* (BK).

Near Ku-Jae, c. 150 km NW of Kanburi, marshy plains, 100-150 m; *Kostermaas 1319* (*Kuue Noi R. basin exp. 1946*) (L).

PEN. — Nakorn Si Thammarat, Tung Song, local name *lok ki mac*: *Rabot 110* (BK). DISTR. S. and S. E. Asia, Malaysia.

111. *C. HASPAN* L., Sp. Pl. 1: 45. 1753; F.B.I.: 600; F. KC.: 82; W. 224; Mat. F.M.P.: 64; Hoss. 1910: 458; 1911b: 370; Ridl. 1911: 221; F.I.C.: 50; Turr.: 422; Ridl. 1920: 124; F.M.P.: 142; Koy. 1955: 210; 1947: 29. *C. flavidus* var. *africanus* Camus, Fl. Gén. I-C. 7: 51. 1912.

N. — Chiangmai, Doi Sothep, swamp, 1100 m; *Smithson 114* (RFD 8157) (BK). Muang Fong, rocky soil, gray mud near hot spring: *Kostermaas 64* (L).

N.E. — Loei, Phu Krading, common by path near Rest House, 1300 m; *Smithson 114* (L).

E. — Chaiyaphum, Pa Kio, in open ground, 1000 m; *Kerr 59211* (BK, L).

C. — Bangkok, along open ditches: *Kerr 5977* (BK); on road side: *Kerr 11057* (BK). Bangkok, Bangkok, RFD Compound, common near water, under 10 m; *Smithson 5415* (RFD 19740) (L).

S.E. — Prachinburi, Arjan Prathet: *Pat 1978* (BK); Lanchalang, swamp, 20 ft; *Colling 1895* (BK, L).

Trat, Kaw Chang, Khlawng Mayom, on rock crevices by stream, 100 m; *Kerr 6000* (BK); Kaw Kut, sandy soil in plantations, 5 m; *Smithson 5739* (L).

S.W. — Ku-Jae, about 150 km NW of Kanburi, 100-150 m; *Kostermaas 1319* (*Kuue Noi R. basin exp. 1946*) (BK).

PEN. — Ranong, Nam Chant, edge of marshy ground, near subvol. Kerr 1171 (BK).

Langsuan, Kao Norn Sai, open space in evergreen forest, 100 m., Kerr 1181 (BK).

Surat, in open scrub, under 10 m. Kerr 1196 (BK, L). Kao Samui, in rock clefts by stream, 100 m. Kerr 1216 (BK).

Tiang, Ampo Kao Kao, near stream 4480 ft (BK); Kanung wetland in swamp, under 50 m. Southeast 1219 (RFD 12510) (L).

Songkhla, in sandy ground by sea; Kerr 1211 (BK).

Satun: Ridley 1421, 1422 (BK, SING).

DISTR. Tropical and sub tropical regions of the whole world

112. *C. TEXTURICA* Steud., Syn. 2: 11 1855; Kern, Reimw. 2: 116. 1952; 3: 38. 1954. — *C. flavidus* (non Retz.) F.B.I. 600 F.I.C.: 51, f. 4, 12. excl. var. *africanus* Camus

N. — Nakorn Sawan, Takli, Post 2111 (BK).

S.E. — Chanturi, Makham, Ban Ang, common in wet localities, 10 m. Banak 211 (L).

S.W. — Kanburi, common in wet ground, 50 m. Southeast 1258 (RFD 12694) (L).

Also in Hainan: Ang Mao, dry paddy fields, 1700 ft. Engl. Smith 21 (BK).

DISTR. Tropical Africa, Asia (extending to China and Japan), and Australia

113. *C. CUSPIDATUS* Kunth in H.B.K., Nov. Gen. & Sp. 1: 204 1815. F.B.I. 598 — *C. squarrosus* (non L.) F.I.C.: 55. — *C. uncinatus* (non Poir.) Mat. F.M.P. 64, F.I.C.: 47, f. 4, 5—6, Turcz. 422; F.M.P. 141

N. — Mae Hongson, lawn, 400 m. Southeast 1374 (L). Lampoon, Hang Chai, common in open dry *Dipterocarpus* forest, 300 m., local name dok runghm pak. Banak 1930 (BK, BK F).

N. — Nakorn Phanom, Muk Tahan, on gravel in open deciduous forest, 100 m. Kerr 1398 (BK).

E. — Nakorn Ratchasima, Korm, on sandy soil in open deciduous forest, 200 m. Kerr 1405 (BK).

S.E. — Chantaboon: Vientiane 21 (SING); Ieru Sang, Nu Ya 10 (BK).

Trat, Kaw Chang, Pak Khlok, common in paddy fields and scrub jungle, under 10 m. Banak 141 (RFD 12515) (L).

S.W. — Prachuap, Hua Hin, in open grassy, sandy ground near seashore; Kerr 1413 (BK).

PEN. — Surat, Kantub 1414 (BK); Surat, Bangboon, common in sandy soil in evergreen jungle, under 50 m. Paloech 9 12 (RFD 12220) (L).

DISTR. Pantropic

114. *C. CASTANEUS* Willd., Sp. Pl. 1: 278. 1797. F.B.I. 598; Mat. F.M.P. 63, F.I.C. 46, f. 4, 8—11, F.M.P. 141. — *C. amabilis* (non Vahl) F.I.C.: 55. C. — Nakorn Nayok, on the way to Wang Nang, rocky ground, 100 m. Southeast 1381 (L).

DISTR. Tropical Asia and Australia

115. *C. squarrosus* L., Cent. Pl. 2: 6. 1756; Kern: 642. — *C. arizonicus* Rathb., Progr.: 22. 1772; F.B.I.: 606.

S.W. — Prachuap, Hua Hin, on sandy ground in scrub, 5 m; *Kerr 13407* (BK); *Rei Yawt: Pat 2507* (BK).

DISTR. Tropical Africa, extending to S. Africa; tropical Asia to S. China and Malaysia; Australia; from S. Canada through the U.S.A. and tropical America to Argentina and Chile.

116. *C. leucocephalus* Retz., Obs. 5: 11. 1789; F.B.I.: 602, p.p. Turr.: 422; Kern, Reinw. 3: 39, 1954; Kern: 644. — *Kyllinga piperis* Camus, Not. Syst. 1: 290. 1910; F.I.C.: 27.

N. — Mae Hongson, in dry *Dipterocarpus* forest, 400 m; *Smitinand 4568* (L).

N.E. — Loi, Wang Saphung, Sithan, 300 m, local name *yah laek mai*; *Dec 2* (RF 4667).

Nakawn Panom, Muk Daban, in open deciduous forest, 200 m; *Kerr 21347* (BK).
Khawkaen, Chumpae, common by roadsides in sandy soil, 250 m; *Smitinand 5886* (L).

E. — Srisaket, Kauntharom, in scrub jungle near village, 200 m; *Smitinand 5886* (L).

S.E. — Chanhuri, Mahham, common in the plain, 130 m; *Banmak 281* (RFD 10) (L); along edge of thicket, 20 m; *Smitinand 5743* (RFD 11509) (L).

Krabla, Aranya, in deciduous forest, under 50 m; *Kerr 12305* (BK).

S.W. — Kanburi, Pa-pu-thung, on level area of mixed forest, 165 m; *Banmak 451* (L).
DISTR. S.E. Asia.

117. *C. niveus* Retz., Obs. 5: 12. 1791; F.B.I.: 601; Kern: 644. — *C. leucocephalus* (non Retz.) F.I.C.: 51.

N. — Mae Hongson, in dry *Dipterocarpus* forest, 400 m; *Smitinand 4971* (L).
Nakawn Sawan, Hua Wai; *Pat 4007* (BK).

S.W. — Kanburi, Kao Tuang, in open deciduous forest on limestone hill, 100 m; *Kerr 12715* (BK); Wang Kanai, abundant in open deciduous forest, 50—100 m; *Kerr 12846* (BK).

DISTR. S. Asia.

118. *C. cephalotes* Vahl, En. 2: 311. 1806; F.B.I.: 597; F.I.C.: 4 f. 4, 1—4; Turr.: 421.

E. — Nakawn Rachasima, Korat, open marshy ground, 200 m; *Kerr 3087* (BK).

C. — Bangkok, in open marsh with *Salvinia* sp.; *Kerr 3978* (BK).

PEN. — Surat, forming, with *Salvinia* sp., floating islands in the river, under 10 m; *Kerr 11284* (BK), *Kerr 11285* (BK); Bandon: *Seidenfaden 2008* (SING); Eka Tale Lake: *Seidenfaden 2391* (SING), 2380 (SING).

DISTR. S. and S.E. Asia, Malaysia, tropical Australia.

In *Kerr 11288* and *Seidenfaden 2008*, both from Surat, the leaves are much narrower than usual, but the glumes, nuts, etc. are as in typical *Cyperus cephalotes*.

119. *C. PYGMAEUS* Rottb., Descr. & Ic.: 20, t. 14, f. 4, 5. 1773. — *Juncellus pygmaeus* (Rottb.) Clarke, Fl. Br. Ind. 6: 596. 1893; F.I.C.: 38; Turr.: 421.

S. — Ne Ping Rapids, Kaeng Umi Luk, on sandy beach: *Sawatubandhu* s.n. (BK).

S.E. — Nakawen Panom, on sand-bank in river, 200 m: *Kerr 21352* (BK).

C. — Bangkok: *Feilberg* s.n. (C): Bangkok, in dried up mud of rice-field: *Kerr 2764* (BK).

S.E. — Chanturi, Makham, near water, 20 m: *Smitinand 5747* (L).

DISTR. N. and E. Africa, S. and E. Asia to Australia.

120. *C. UNILOIDES* R. Br., Prodr.: 216. 1810; Koy. 1955: 213; 1957: 32; Kern: 645. — *C. angulatus* Nees in Wight, Contr. Bot. Ind.: 73. 1834. — *Pycrota angulatus* (Nees) Nees, Linnaea 9: 283. 1834; F.B.I.: 593; F.I.C.: 35. — *Pycrota unioloides* (R. Br.) Urb., Symb. Ant. 2: 164. 1900; Turr.: 421.

S.E. — Loei, Phu Krading, in savannah, 1300 m: *Smitinand 1952, 5345, 5933* (L).

C. — Chabudun, Dong Pyn Yen, in marshy savannah, 100 m: *Kerr 3607* (BK).

DISTR. Pantropic.

121. *C. RANGUINOLENTUS* Vahl, En. 2: 351. 1806. — *Pycrota sanguinolentus* (Vahl) Nees, Linnaea 9: 283. 1834; F.B.I.: 590; Mat. F.M.P.: 60; F.I.C.: 30; F.M.P.: 139.

S.E. — Nakawen Panom, Paknam Songkram, on sand-bank in river, 200 m: *Kerr 21365* (BK).

DISTR. Warmer parts of the Eastern Hemisphere.

122. *C. GLOBOSUS* All., Fl. Pedem. Auct.: 49. 1789; Koy. 1955: 213; 1957: 32. — *C. capillaris* Koenig ex Roxb., Fl. Ind. 1: 198. 1820. — *Pycrota globosus* (All.) Reichenb., Fl. Germ. Exc. 2: 140. 1830; F.I.C.: 31, f. 3, 10; Turr.: 421. — *Pycrota capillaris* (Roxb.) Nees, Linnaea 9: 283. 1834; F.B.I.: 591.

S.E. — Nakawen Panom, Paknam Songkram, on sand-bank in river, 200 m: *Kerr 21363* (BK).

S.W. — Kin Sayok, about 140 km NW of Kanburi, on limestone rock in marshy place, 100—150 m: *Kostermans 1239* (*Kuao Noi R. basin exp. 1948*) (BO, L).

DISTR. Warmer parts of the Eastern Hemisphere.

123. *C. POLYSTACHYOS* Rottb., Progr.: 21. 1772; Ridl. 1915: 168. — *Pycrota polystachyos* (Rottb.) Beauv., Pl. Oware & Benin 2: 48, t. 86, f. 2. 1807; F.B.I.: 592; F. KC.: 81; Will.: 223; Mat. F.M.P.: 60; Hoëss. 1910: 458; 1911b: 370; Ridl. 1911: 220; F.I.C.: 34; F.M.P.: 139. — *C. odoratus* (non L.) Kill.: 55.

C. — Bangkok, waste ground: *Kerr 2863* (BK); on low-lying open ground: *Kerr* s.n. (BK).

S.E. — Mouth of Chantabun River, on edge of road running through salt marsh, on 5 m: Kerr 17586 (BK).

Koh Chang, Lem Dan: Joh. Schmidt 748a (C).

S.W. — Prachuap, Ban Nawng Kang, open ground, under 50 m: Kerr 16642 (BK); Kaw Tao, in rock crevices near sea: Kerr 16083 (BK).

Chumphaw, Bang Son: Put 1547 (BK, L).

PEN. — Surat, Ban Dawn, in tidal swamp at mouth of Ban Dawn R.: Kerr 16642 (BK, L); Kaw Samul, on open rocks by stream, 200 m: Kerr 12577 (BK); Kaw Samul, Ban Bua Put, in open scrub, under 5 m: Kerr 14703 (BK).

Trang, Ampo Kao Kao, near stream, local name *koh kine*: Rabill 240 (BK).

Satun: Ridley s.n. (SING); Satun, Butang, in rocky ground by sea: Kerr 16642 (BK).

DISTR. Warmer parts of the whole world.

124. *C. SULCINUS* Clarke, Journ. Linn. Soc. 21: 56. 1884 — *Pycreus sulcinus* (Clarke) Clarke, Fl. Br. Ind. 6: 593. 1893; F. KC.: 82; Willd. 224; Hoss. 1910; 458.

S.E. — Koh Chang, Lem Dan: Joh. Schmidt s.n. (C).

Also in Cambodia: "Mainland opposite Koh Kong": Joh. Schmidt 380 s.p. (C).

DISTR. From India to S. China and tropical Australia.

125. *C. FUMILUS* L., Cent. Pl. 2: 6. 1756. — *C. nitens* Retz., Obs. 13. 1789; Hoss. 1911a: 372. — *Pycreus nitens* (Retz.) Nees, Nov. Act. A Nat. Cur. 19, Suppl. 1: 53. 1843; F.B.I.: 591; Mat. F.M.P.: 61; Hoss. 1911b: 370; F.L.C.: 33; Turr.: 421; F.M.P.: 140.

N. — Chiangmai, 1000 ft: Kerr 803 (L).

Phuac, Mo Ban: C. W. French 1326 (C).

N.E. — Loi, Phu Krading, 1300 m: Smitinand 1247 (L).

E. — Korat, Pak Tong Chai, open sandy ground, 200 m: Kerr 3111 (BK).

C. — Nakawn Sawan, Wang Djae, common in savannah-forest: Hossens 104 (UM).

S.E. — Chantabun, Lem Sing: Nai Nee 136 (BK); Chantaburi, Makhaim, Rphaw, Poeng, common by stream, 50 m: Smitinand 4538 (RPD 19723) (L).

S.W. — Kanchuri, common in wet locality, 60 m: Smitinand 3869 (RPD 16003) (L).

PEN. — Surat, Bandon, Aerodrome Road, humid sandy flats: *Scidosafedra* 3425 (C, SING).

DISTR. From India to S. China and tropical Australia.

126. *C. DIAPHANUS* Schrad. ex R. & S., Mant. 2: 477. 1824; Kém 644. — *C. latespicatus* Boeck., Flora 42: 441 ("483"). 1859. — *Pycreus latespicatus* (Boeck.) Clarke, Fl. Br. Ind. 6: 590. 1893; F.L.C.: 30.

N.E. — Loi, Phu Krading, Rest House, in savannah, 1300 m: Smitinand 3635 (L).

S.E. — Prachinburi, Arun Prathet, in open marshy ground, 60 m: Kerr 19377 (BK, S).

DISTR. From Central Asia to India and Malaysia.

127. *C. SUBSTRAMINEUS* Kük., Pflanzenr. Heft 101: 398. 1936. — *C. stramineus* Nees in Wight, Contr. Bot. Ind.: 74. 1834, non Desf. (1820). — *Parvus stramineus* (Nees) Clarke, Fl. Br. Ind. 6: 589. 1893; F.I.C.: 29. PEN.—Phuket, Khan Pok Kasom; Muniff & Nur 3555 (BO, K, SING).

DISTR. From Khasia and Ceylon through India to Farther India and the Malay Peninsula.

128. *C. JAVANICUS* Houtt., Nat. Hist. 2, 13: Aanw. pl. (I), t. 88, f. 1, 1782. — *C. pennatus* Lamk, Ill. 1: 144. 1791; Will.: 224; Hoss. 1910: 458; Kill.: 56. — *Mariscus alberticus* Gaudich. in Freyc., Voyage Bot.: 416. 1829; F.B.I.: 623; F. KC.: 82; Mat. F.M.P.: 74; Ridl. 1911: 222; F.I.C.: 78; F.M.P.: 149.

— Bangkok, waste ground; Kerr 3888 (BK); Bangkok, Wat Sing, shady ground inundated at high tide, under 5 m: Kerr 4706 (BK); Bangkok, Bangkapi, bank of pool; Rosenbruch 2 (BK).

— Trut, Kaw Chang, Khisawng Nonsi, sandy soil, 5 m: Smitinand 5655 (L); Koh Lon W of Koh Chang; Joh. Schmidt 7760 (C); Lom Ngob, inner margin of mangrove; Joh. Schmidt 58 (C).

PEN.—Sorai, Kaw Too, in tidal marsh: Kerr 11227 (BK).

DISTR. From tropical Africa and Madagascar through S. Asia to S. China, the Riu Kiu Islands and Formosa, to the Pacific Islands and through Malaysia to tropical Australia.

129. *C. COMPACTUS* Retz., Obs. 5: 10. 1789. — *C. dilutus* Vahl, En. 2: 367. 1806; Will.: 224; Hoss. 1910: 458; Kill.: 56. — *Mariscus microcephalus* Presl, Rel. Haenk. 1: 182. 1828; F.B.I.: 624; F. KC.: 83; Mat. F.M.P.: 74; Ridl. 1911: 221; 1920: 124; Turr.: 423; F.M.P.: 149. — *Spharcomariscus microcephalus* (Presl) Camus in Lecomte, Not. Syst. 1: 239. 1910; F.I.C.: 79.

— Thailand, Dong Pyn Yen, edge of savannah, 100 m: Kerr 8012 (BK).

Bangkok, waste ground: Kerr 3885 (BK); by marshy pool: Kerr 388, (BK).

Nonthaburi, local name *kok*: Vornichaporn 19 (BK).

— E.—Prachinburi, near Sierrachu, 30 ft: Mrs Collins 1886 (BK); Chanturi, Pong Nam Rawu, Wang Kaphae, 120 m: Smitinand 3347 (RFD 14677) (L).

— W.—Kanchuri, Wang Ka: Pat 22 (BK).

Sem Neeckey, near Wangka, rather common in open space among other *Cyperaceae* and *Gramineae*, 150 m: den Hoed 325 (Kwan Noi R. basin exp. 1946) (L); marshy plain near Ku Jas, c. 150 km W of Kanchuri: Kostermans 1422 (Kwan Noi R. basin exp. 1946) (L).

PEN.—Satul, Kham Pho, in savannah, 20 m: Kerr 18761 (BK).

Bau Luang (Royal Landing): Hugh M. Smith 158 (SING).

DISTR. From India to S. China, Formosa, and Malaysia.

130. *C. STENOPHYLLUS* Vahlk. Sur., Nova Guinea 8: 701, t. 114. 191.
S.T. Blake, Journ. Arn. Arb. 28: 221. 1947.

S.E. — Prachinburi, Arun Prathet, marshy ground in open deciduous forest, 100 m; *Kerr 19618* (BK).

DISTR. Solomon Islands, Melanésia, Malaysia.

131. *C. CYPEROIDES* (L.) O. Kuntze, Rev. Gen. Pl. 3, 2: 333. 1899.
Scirpus cyperoides L., Mant. 2: 181. 1771. — *Mariscus sieberianus* Nees & Clarke, Fl. Br. Ind. 6: 622. 1893; Mat. F.M.P.: 72; F.M.P.: 148. — *Mariscus umbellatus* var. *sieberianus* (Clarke) Camus, Fl. Gen. L.-C. 7: 77. 1912.

N. — Chongrai, Doi Hu Mot, Mae Lao, on ridge, 1450 m; *Smithsonian 575* (BK).
Lampang, Ngao, Mae Huat, common in deciduous forest, 360 m; *Bunnak 5* (BK).
11260 (L).

Mue Hawnawun, in dry *Dipterocarpus* forest, 400 m; *Smithsonian 4572* (L).

Phetchabun, Lamkoo, Phu Heu, common in oak forest, 860 m; *Smithsonian 575* (BK).
15130 (L).

N.E. — Nakawn Panom, Muk Dahan, in deciduous forest, 200 m; *Kerr 11528* (BK).

S.W. — Kiri Sayok, c. 120 km NW of Kanburi, mixed forest along river; *Kosterma 1212* (*Kwae Noi R. basin exp. 1940*) (L); Birman border, Tripagadas, 40 km N of Wangka, sandy soil near railroad, 280 m; *Wichian 337* (*Kwae Noi R. basin exp. 1940*) (BK, BO, L, PNH, SING); near Neekey, near Wangka, sandy soil near Kan Ti River, 150 m; *Wichian 192* (*Kwae Noi R. basin exp. 1940*) (BK, PNH, SING); Brangkasi, along path; *den Hoed & Kosterma 686* (*Kwae Noi R. basin exp. 1946*) (L).

PER. — Surat, Kaw Tao, in evergreen forest near sea, 10 m; *Kerr 11180* (BK); same locality, on open sandy ground by sea, near penlevel; *Kerr 19736* (BK).

DISTR. Tropics and subtropics of Africa, Asia, and Australia; in the West Indies presumably introduced.

132. *C. CYPERINUS* (Retz.) Vahlk. Sur., Gesl. Cyp. Mal. Arch.: 13. t. 6, f. 10. 1898. — *Kyllingia cyperina* Retz., Obs. 6: 21. 1791. — *Mariscus cyperinus* (Retz.) Vahl, En. 2: 377. 1806; F.B.I.: 621; Mat. F.M.P.: 72. Ridl, 1911: 221; Turr.: 423; F.M.P.: 149. — *Mariscus umbellatus* var. *cyperinus* (Retz.) Camus, Fl. Gén. L.-C. 7: 77. 1912.

N. — Mae Hawnawun, in dry *Dipterocarpus* forest, 400 m; *Smithsonian 4572 A* (L).
Nakawn Sawan, Me Wong, damp ground by stream in mixed forest, 300 m; *Kerr 6053* (BK).

N.E. — Laoi, Phu Krading, Sain Khue, by path in evergreen forest, 1100 m; *Smithsonian 5944* (L).

Nakawn Panom, Muk Dahan, Pu Mann, in deciduous forest, 200 m; *Kerr 211* (BK).

S.E. — Krabi, Aranya, in deciduous forest, under 50 m; *Kerr 19532* (BK).
Trat, Kaw Chang, Kuluwng Nonsi, in sandy soil, 5 m; *Smithsonian 5053* (L); R. Kut, in coconut plantation, 6 m; *Smithsonian 5767* (L).

132. Prachuap, Kao Luang, open ground, 1200 m: *Kerr 10843* (BK).

133. Surat, Kaw Samui, sandy ground in coconut plantation, near sealevel: *Kerr 12022* (BK).

Nakhon Si Thammarat, Sichon, in scrub, under 50 m: *Kerr 15687* (BK).

Satun: *Ridley 14417* (H.M. K. SING).

DISTR. From S.E. Asia through Malaysia to Melanesia, Polynesia, and Queensland.

133. *C. PANICEUS* (Rottb.) Boeck., *Linnaea* 36: 381. 1870. — *Cyperus panicus* Rottb., *Deser. & Ic.*: 15, t. 4, f. 1. 1773.

In Thailand:

var. *ROXBURGHIANUS* (Clarke) Kük., *Pflanzenr.*, Heft 101: 526. 1936.

— *Mariscus panicus* var. *roxburghianus* Clarke, *Fl. Br. Ind.* 6: 621. 1893; *Turr.*: 423.

— Roat, Ban Chumsaeng, in paddy field: *Nai Nor 127* (BK).

DISTR. of the variety: India, Java, Madura.

134. *C. DUBIUS* Rottb., *Deser. & Ic.*: 20, t. 4, f. 5. 1773. — *C. kyllingoides* Vahl, *En.* 2: 312. 1806; *Kill.*: 55. — *Mariscus dryeanus* Kunth, *En.* 2: 120. 1837; *F.B.I.*: 620; *Mat. F.M.P.*: 72; *Ridl.* 1911: 221; *Turr.*: 423; *F.J.C.*: 75; *F.M.P.*: 148. — *Mariscus merrillii* Clarke, *Philip. Journ. Sc.* 2, Bot.: 87. 1907. — *C. merrillii* (Clarke) Kük., *Pflanzenr.*, Heft 101: 522. 1936.

135. — Nakhon Phanom, Muk Dahan, Pu Mano, in deciduous forest, rocky ground, 200 m: *Kerr 21438* (BK).

136. — Udon, Ban Chumsaeng: *Pot 3632* (BK).

137. — Sukhothai, Meenam Sak, mixed deciduous forest, 40 m: *Kerr 7023* (BK, SING).

138. — Samut, Ta Salua, in open grassy forest, 50 m: *Kerr 12159* (BK), *Pot 3950* (BK).

Prachuap, in crevices of limestone rocks by sea: *Kerr 10724* (BK).

Plant brought from Bangkok, now (4.3.1928) flowering in Bangkok: *Kerr 21333* (BK).

139. — Surat, Kaw Tao, in rock clefts near sea: *Kerr 11241* (BK); Kaw Samui, Ban Bui Pat, sandy ground near sea: *Kerr 15696* (BK).

Satun, Adung, in crevices of rock near sea, 5 m: *Kerr 14086* (BK); Satun: *Ridley 14412* (K, SING).

DISTR. In the African steppes; S. Asia to S. China and Malaysia.

In *Reinwardtia* 3: 59. 1954 I referred *Kerr 7023* to *Cyperus merrillii* on account of the narrow glumes and nuts. I then already came to the conclusion that the only reliable characters to distinguish between *C. dubius* and *C. merrillii* seem to be found in the shape of the glumes and the nuts. Since I have seen numerous collections from continental Asia perfectly connecting the two, and it appeared that no doubt they are conspecific.

135. *C. PEDUNCULATUS* (R. Br.) Kern, *Art. Bot. Neerl.* 7: 799. 1810. — *Remirea maritima* Aubl., *Hist. Pl. Guian. Franc.* 1: 45, t. 16, 17. F.B.I.: 677; F. K.C.: 92; Willd.: 226; Mat. F.M.P.: 99; Hoss. 1910; 4. Ridl. 1911: 224; 1912: 63; F.I.C.: 155; F.M.P.: 169, non *Cyperus tenuis* Poir. — *R. pedunculata* R. Br., *Prodr.*: 236. 1810.

S.E. — Kaw Chang, Khlawng Kloi, on sandy ground close to sea: *Kerr* 16188 (BK). S.W. — Puchuap, Kao Tao, sandy ground by sea: *Kerr* 16188 (BK).

PEN. — Sarat, Kaw Samul, in sand on seashore: *Kerr* 14388 (BK).

Satul, Islet off Tunga, in sand of beach: *Kerr* 14456 (BK); *Palau Archipelago* Ridley 15675 (SING).

DISTR. All tropical seacoasts.

136. *C. ODORATUS* L., *Sp. Pl.* 1: 46, 1753; Dandy in Exell, *Cat. V. Pl. S. Thomé*: 369. 1944. — *Torulinum ferox* Ham., *Prodr. Pl. Ind.* 06. 15. 1826. — *Mariscus ferox* (Ham.) Clarke, *Fl. Br. Ind.* 6: 624, 1893. — *Mariscus siberianus* var. *evolutior* (non Clarke) Mat. F.M.P.: 73, p. F.M.P.: 149, p.p.

N.E. — Nakawn Panom, Muk Dahon, on sand-bank in river, 200 m: *Kerr* 21476 (BK).

DISTR. All warm parts of the Old and New World.

137. *C. TRICEPS* (Rothb.) Endl., *Cat. Hort. Ac. Viadob.* 1: 94. 1802. — *Kyllinga triceps* Rothb., *Deser. & Ic.*: 14. 1773; F.B.I.: 587. — *Kyllinga cylindrica* (non Nees) Mat. F.M.P.: 59; F.M.P.: 137.

E. — Srisaket, Kancharom, common in scrub jungle near village, 300 m, local name *phai bang*: *Smithsonian* 587 (RFD 5135) (L).

S.W. — Kanhari, Pa-ph-thong, in mixed forest, 105 m: *Stuebel* 840 (L).

DISTR. Tropical Africa, Asia, and Australia.

138. *C. SESQUIFLORUS* (Torr.) Mattf. & Kük., *Pflanzenr.*, Heft 10. 591. 1936.

In Thailand:

var. *CYLINDRICUS* (Nees) Kük., *l.c.*, p. 593. — *Kyllinga cylindrica* Nees in Wight, *Contr. Bot. Ind.*: 91. 1834; F.B.I.: 588; F.I.C.: 23.

N. — Chiangmai, Me Ten, in open evergreen forest, 700 m: *Kerr* 8472 (BK); 9. Sathep, common in hill evergreen forest, 1100 m, local name *phai bang*: *Smithsonian* 112 (RFD 3852) (BK).

DISTR. of the variety. Tropical Africa, S.E. Asia to Yunnan & Formosa, Malaysia.

139. *C. BREVIFOLIUS* (Rothb.) Hassk., *Cat. Hort. Bog.*: 24. 1844. — *Kyllinga brevifolia* Rothb., *Deser. & Ic.*: 13, t. 4, f. 3. 1773; F.B.I.: 588; Mat. F.M.P.: 58; F.I.C.: 24, f. 3, 3—6; Turp.: 421; F.M.P.: 138; Kill.: 5.

- *Chiangmai*, Doi Suthep, common by stream in damp ground, 1160 m: *Smithsonian* 472 (RFD 6142) (BK); Doi Chiangdau, abandoned clearings, 1400—1500 m: *Smithsonian* 472 (BK).
- *Chiangrai*, Thung Maku, common in wet localities, 130 m: *Burmese* 127 (L).
- *Near Neechey*, near Wangka, 150 m: *den Hoed* 146 (*Kwae Noi R. basin exp.* 1946) (BK, L).
- *Siam*, under 10 m: *Kerr* 11346 (BK); Bangbae, common by river in old clearings, under 50 m: *Phloenchit* 358 (RFD 12932) (L); Kantuli: *Pat* 4182 (BK). *Siam*, Spikamurul, Khiriwong, 100 m: *Phloenchit* 358 (RFD 11576) (L). *Siam*, Sala Yoi, open wet ground, under 50 m: *Kerr* 14795 (BK).
- DISTR. Palearctic.

130. *C. RYLLINGIA* Endl., Cat. Hort. Ac. Vindob. 1: 94. 1842. — *Polypogon monocephalus* Roth., Deser. & Ic.: 13, t. 4, f. 4. 1773; F.B.I.: 588; F. KC.: 80; Mat. F.M.P.: 58; Hoss. 1910: 459; Ridl. 1911: 220; F.I.C.: 38, L3, 1—2; Turcz. 421; Ridl. 1920: 124; F.M.P.: 138. — *C. monocephalus* Roth. F. v. M., Fragm. 8: 271. 1874; Will.: 224, non Roxb. (1832).
- *Chiangmai*: *Kerr* 20, (BK).
- *Bangkok*, in wet place (collector?); Krungthep, Khao Din, common in waste ground, under 10 m, local name *phak tauhu*: *Dec* RFD 9134 (L).
- *Tait*, Ruß Chang: *Finck Nielsen* 896 (C).
- *Banburi*, Wang Pra: *Pat* 26 (BK); Branghasi, common along paths, 150 m: *den Hoed & Kosterwans* 388 (*Kwae Noi R. basin exp.* 1946) (L); near Neechey, near Wangka, 150 m: *den Hoed* 146 (*Kwae Noi R. basin exp.* 1946) (BK, B), (L, SING).
- *Chiangphuan*: *Kelch* 341 (SING).
- *Phant*, Haudan River: *Schlotheim* 2225 (C, SING).
- *Siam*, Sriphamurat, Khao Luang, common in evergreen jungle, 800 m, local name *phak tau hu*: *Swan* 351 (RFD 13007) (L); Khiriwong, common on sandy bank of stream, 200 m: *Phloenchit* 353 (RFD 2958) (L).
- *Tung Song*, Ao Wang Kraim, in valley, local name *phak tau hu*: *Ridl* 316 (BK). *Siam*, exact locality: *Mex Collins* 856 (BK).
- DISTR. Palearctic.

XII. RHYNCHOSPORA Vahl

131. *R. CORYMBOSA* (L.) Britt., Transact. N.Y. Ac. Sc. 11: 84. 1892. — *Scirpus corymbosus* L., Cent. Pl. 2: 7. 1756. — *R. aurea* Vahl, En. 2: 329. 1806; F.B.I.: 670; F. KC.: 91; Will.: 225; Mat. F.M.P.: 83; Hoss. 1910: 463; Ridl. 1911: 224; F.M.P.: 164.
- *Chiangrai*, Phuachaguan 29 (BK).
- *Bangkok*, on bank of open tidal canal: *Kerr* 6386 (BK); Bangkok, Klong side: *Pat* 3636 (BK).
- *Tung*, Anpa Kao Kua, near stream, local names *phak tau hu* or *phak tau hu*: *Ridl* 316 (BK); Chawang, common by stream, 100 m: *Smithsonian* 4581 (L).
- DISTR. Palearctic.

142. *R. HOOKERI* Boeck., *Linnaea* 37: 621. 1873; F.B.I.: 671; *K. Blumea* 9: 230. 1958.

S.E. — Prachinburi, Aran Pruthet; *For* 1991 (BK).

S.W. — Marshy plain near Ku-Jae, c. 150 km NW of Kanburi, 100—150 m; *Koeterninus* 1869 (L), 1874 (*Kuue Noi R. basin exp.* 1940) (BO, L, SING).

PEN. — Surat, Kanchanadit, in marshy ground, 5 m; *Kerr* 18963 (BK, K, L). Without exact locality; *Howard* 27 (K).

DISTR. India, Burma, Tonkin, Malay Peninsula, W. Java, everywhere scattered.

143. *R. RUBRA* (Lour.) Makino, *Bot. Mag. Tokyo* 17: 180, t. 7, f. 1b. 1903. — *Schoenus ruber* Lour., *Fl. Cochinch.* 1: 41. 1790. — *R. liekiana* Kunth, *En.* 2: 289. 1827; F.B.I.: 668; *Mat. F.M.P.*: 82; *Ridk.* 18: 224; F.I.C.: 145; *Turr.*: 426; F.M.P.: 164.

N. — Chiangmai, Doi Suthep, in gravelly soil in dry deciduous forest, 700 m; *Smithson* 5651 (L), 5693 (*RFD* 16096) (L).

N.E. — Loi, Phu Krading, Rest House, in savannah, 1300 m; *Smithson* 5651 (L), 5693 (*RFD* 16096) (L).

S.E. — Chonburi, Makhum, common in the plain; 20 m; *Smithson* 5765 (L). Trat, Huay Raeng, Dong Mulus, common in rice-field, under 50 m; *Smithson* 1852 (*RFD* 6771) (L).

S.W. — Ku-Jae, c. 150 km NW of Kanburi, grey loam soil, dry gravel, hilly 10—150 m; *Koeterninus* 1868 (*Kuue Noi R. basin exp.* 1940) (L).

Chumphaw, Ban Tung Maha, common in savannah, 20 m; *Kerr* 11415 (BK).

PEN. — Surat, Kanchanadit, very common in savannah, 5 m; *Kerr* 13103 (BK).

Pattalung, Sak, very common in savannah, under 50 m; *Kerr* 19453 (BK).

Patani, Manang Sia, on dry mud in open ground, 50 m; *Kerr* 2309 (BK).

Satol, in grassy savannah, 5 m; *Kerr* 18688 (BK).

DISTR. From S.E. Asia through Malaysia to tropical Australia and Oceania.

144. *R. LONGISETIS* R. Br., *Prodr.*: 230. 1810; F.B.I.: 669; *Ost.*: 70; *Hoss.* 1910: 463; 1911a: 372; 1911b: 371; *Turr.*: 426. — *R. mussonii* Camus, *Not. Syst.* 1: 249. 1910; F.I.C.: 147.

N. — Chiangmai; *Kerr* 1555 B (L).

Nakawn Sawan, Wang Djao, wet localities in savannah forest, common; *Kerr* 1555 (E, L).

S.W. — Petchaburi, Tung Luang, in open sandy ground, under 50 m; *Kerr* 1604 (BK).

Prachuap, Hua Hin, in open grassy sandy ground, 5 m; *Kerr* 13438 (BK).

DISTR. Central India, Burma, Cambodia, New Guinea, tropical Australia.

145. *R. SUBMARGINATA* Kük., *Bot.-Jahrb.* 74: 498. 1949; *Kerr*, *Blumea* 9: 231. 1958. — *R. marginata* Clarke, *Kew Bull.* add. ser. 8: 88 (1939) non Steud. (1855). — *R. wightiana* (non Steud.) F.I.C.: 146; F.M.P.: 164.

- 142 — Chantaburi, Maikhao, Noen Tabok, common in the field, 120 m: *Bunnak 195* (RFD 2512) (L); Chantaburi: *Vestergaard s.n.* (SING).
 143 — Ratcha, open grassy ground, under 50 m: *Kerr 2988* (BK).
 144 — Surat, on rice-field banks, under 10 m: *Kerr 11218* (BK); Kanchanasidi, open sandy ground, 5 m: *Kerr 13088* (BK); Bandon, Aerodrome Road: *Seidenfaden 201* (SING).
 Phuket, Khaw Pek Hill: *Haniff & Nur SF 3822* (SING).
 Trang Hany Yawt, Thale Sawng Hawng, common on sandy banks of freshwater lake, 100 m: *Smithsonian 3027* (RFD 17250) (L).
 Satul, beach: *Hidley 14814, 14815* (SING).
 Kantiang: *Haniff & Nur SF 4708* (SING).
 Distr. India, Tonkin, Malay Peninsula, Sumatra, N. Australia.

145. *R. SUGOSA* (Vahl) Gale, *Rhodora* 46: 275, t. 835, f. 1A—B, 1944.
Schizocoma rugosus Vahl, *Eclog. Am.*: 5, 1793. — *R. glauca* Vahl, *En.* 1: 233, 1806; F.B.I.: 671. — *R. chinensis* (via Nees) Boeck., *Linnaea* 37: 156, 1873. — *R. glauca* Vahl var. *chinensis* Clarke, *Fl. Br. Ind.* 6: 672, 1893; *Mat. F.M.P.*: 84; *Ridl.* 1911: 224; *F.M.P.*: 165.
 146 — Loei, Phu Kradung, common in savannah, 1000—1300 m: *Smithsonian 1951, 2109, 109* (L); Phu Kradung, in marshy ground, 1200 m: *Kerr 8723* (BK).
 147 — Kuch, Sangka, in open marshy ground, 300 m: *Kerr 5368* (BK).
 Trut Kuo Kuap, in open grassy ground, 600 m: *Kerr 17726* (BK).
 148 — Langkuan, by pool in open scrub, under 50 m: *Kerr 11922* (BK).
 Kuch, Ao Luk, in marshy ground, 50 m: *Kerr 18568* (BK).
 Nakawa, Selthamarut, Ta Samet, open grassy ground, under 50 m: *Kerr 14308* (BK).
 Sangkhla, Saba Yut, in sandy ground, under 50 m: *Kerr 14779* (BK).
 Satul, in open marshy ground, 5 m: *Kerr 13742* (BK).
 Distr. Tropics and subtropics of the whole world.

149. *R. GRACILLIMA* Thwaites, *En. Pl. Zeyl.*: 435, 1864; F.B.I.: 671; *Kern 649*.

- 150 — Loei, Phu Kradung, common in savannah, wet localities, 1300 m: *Smithsonian 109* (L). 2958 (RFD 21537) (L).

Distr. Tropical Africa, S.E. Asia, Sumatra, New Guinea, N. Queens-

land

XIII. TRICOSTULARIA Nees

151. *T. UNDULATA* (Thwaites) Kern, *Act. Bot. Neerl.* 8: 267, 1959.
 — *Cladium undulatum* Thwaites, *En. Pl. Zeyl.*: 353, 1864; F.B.I.: 674; *Mat. F.M.P.*: 86; *Ridl.* 1911: 224; *F.I.C.*: 152, f. 19, 2—8; *F.M.P.*: 167. — *Cladium polichrum* Ridl., *Journ. Fed. Mat. St. Mus.* 6: 192, 1915; *F.M.P.*: 167.

PEN.—Surat, Kanchanadit, in savannah, 5 m: *Kerr 13138* (BK, BO), 13148 (BK, BO); Nakawn Srihamarat, Ta Samet, under 50 m: *Kerr 14379* (BK).
 Pattani, in sandy ground, 25 m: *Kerr 7241* (BK, SING).
 Satul, in open grassy ground: *Kerr 13718* (BK); Satul, houth: *Ridley 1130* (SING).

DISTR. From N. Australia to Ceylon and Indo-China.

XIV. SCHOENUS L.

149. *S. CALOSTACHYUS* (R. Br.) Poit., Enc. Suppl. 2: 251. 1811; F.B.C. 673; Mat. F.M.P.: 85; F.I.C.: 150, t. 1, f. C, 6—9; F.M.P.: 166. — *Chorospora calostachya* R. Br., Prodr.: 233. 1810.

PEN.—Ranawng, Kaw Cheng, on sandy ground in *Melaleuca* forest, 5 m: *Kerr 13137* (BK, BO, K).

Surat, Kantull, near sea: *Poir 1164* (BK); Kanchanadit, in savannah, 5 m: *Kerr 13137* (BK, BO, K).

Nakawn Srihamarat, Ta Samet, common in marsh, under 50 m: *Kerr 14378* (BK).

Pattani, on open grassy sandy ground, in loose tufts, near sealevel: *Kerr 7240* (BK, K).

DISTR. From Australia and Micronesia to Thailand and the Riu Kiu Islands.

150. *S. FALCATUS* R. Br., Prodr.: 232. 1810; F.I.C.: 150. — *Lophocarpus tonquinensis* Boeck., Allg. Bot. Zeitschr. 2: 111. 1896. — *Neolophocarpus tonquinensis* (Boeck.) Camus, Fl. Gén. L.-C. 7: 149. 1912, quod syn.

E.—Ubon, Muang Samsip, in tufts on saline sand, 100 m: *Kerr 8355* (BK).

S.W.—Kin Sayok, c. 120 km NW of Kaaburi, 100—150 m: *Kostermans 1137* (*Ros Neri R. baski* exp. 1850) (BO, L).

PEN.—Surat, Nawng Wai, in savannah, 50 m: *Kerr 12369* (BK, BO, L).

Satul, in savannah, 50 m: *Kerr 14411* (BK).

DISTR. From Northern Australia and the Solomon Islands to Thailand, Formosa, and the Riu Kiu Islands.

In typical *Schoenus falcatus* the nuts are distinctly acrobiculate, marked by numerous shallow pits. In *Kerr 8355* they are markedly different by the inflated epidermal cells which give a bullate appearance to their surface. The specimen may represent a separate race of *S. falcatus*.

XV. GAHNIA J.R. & G. Forst.

151. *G. TRISTIS* Nees in Hook. & Arn., Bot. Beech. Voy.: 228. 1832; Mat. F.M.P.: 98; F.M.P.: 168; Raymond, Mém. Jard. Bot. Montréal 54: 76. 1959. — *G. boninua* Boeck., Allg. Bot. Zeitschr. 2: 141. 1896; F.I.C.: 154. — *G. stricta* Boeck., l.c. 142; F.I.C.: 155.

S.E. — Loel, Phu Krading, near Rest House, common by stream along edge of evergreen jungle, 1300 m: *Swinhoe 1898 (RPD 18985) (L)*.

S.E. — Teat, Kao Kuap, rocky ground in light evergreen forest, 700 m: *Kerr 17778 (BK)*.

Thung, Sikao, in open evergreen forest on sandy soil, under 50 m: *Kerr 18638 (BK)*.

Songkhla, Kampangpet, in open forest on sandy ground, 50 m: *Kerr 15915 (BK)*.

DISTR. S. China, Rin Kiu Islands, Indo-China, W. Malaysia. The record "Moluccas" (Bentl. Bot. Arch. 40: 183, 1940; Raymond, l.c.: 76) refers to a specimen of *G. asperum* (R. Br.) Spreng., a closely related eastern species.

XVI. SCLERIA Berg.

152. *S. caricina* (R. Br.) Benth., Fl. Austr. 7: 426, 1878; F.B.I.: 688; Mat. F.M.P.: 111; Ridl. 1911: 225; F.M.P.: 178. — *Diploerum caricinum* R. Br., Prodr.: 241, 1810; F.J.C.: 157.

S. — Don Jaga, *French 1892 (C)*.

C. — Bangkok, evergreen forest, marsh: *Munro 2359 (BM, K)*.

B.K. — Near Sriracha, rice-fields, very frequent, 10—20 ft: *Mrs Collins 1488 (BM, K)*, 1531 (BK, K), 1952 (BK, K), 2251 (BM).

Chumabun: *Vesterdal 391 (C, SING)*.

Tut, Bui Rang, in evergreen scrub, 5 m: *Kerr 17509 (BK, BM)*; Kaw Chung,

Salak Kwak, in open scrub, 10 m: *Kerr 5225 (BM, K)*.

PEH. — Rahawng, La-ou, in open grassy ground, 10 m: *Kerr 18449 (BK, BM, K)*.

Surat, in open scrub: *Kerr 11287 (BM, K)*; Khun Tala Lake: *Seidenfaden 2335 (C, SING)*; Kaw Samul, Ban Bea Pat, in open scrub, under 5 m: *Kerr 16709 (BK, BM, K)*.

Phuket, Khaw Pok Hill, in tallang (*Imperata*), 1500 ft: *Hawiff & Nae SF 8847 (K, SING)*.

Samut, heath: *Ridley 11896 (BM, K, SING)*; Samut, Khuan Pho, common roadside weed, 20 m: *Kerr 13776 (BK, BM, K)*.

DISTR. S. and S.E. Asia, Malaysia, tropical Australia.

153. *S. reticulata* (Holt.) Kern, *comb. nov.* — *Diploerum reticulatum* Holt., Gard. Bull. Sing. 11: 295, f. 6, 1947.

PEH. — Surat, Ban Na: *Yuang 51 (K)*.

DISTR. Also known from the Malay Peninsula (Pahang, Gua Tipus; type locality), East Bengal, and Lower Burma (Kyaukpyu Isl.).

A very remarkable species, closely similar in habit to *S. caricina*. Holttum distinguishes it by the turbinate, not cylindric, female spikelets with entire glumes, and by the broader reticulate nuts. An additional differentiating character is to be found in the nervation of the glumes of the female spikelets; strongly many-nerved in *S. caricina*, faintly few-nerved

with only the midrib prominent in *S. reticulata*. To me the differences in the nut are inconspicuous if any. The nut in *S. caricina* is very variable and in some specimens I found it hardly distinguishable from that of *S. reticulata*.

154. *S. LEVIS* Retz., Obs. 4: 13. 1786; S. T. Blake, Journ. Arn. Arb. 35: 226, 1954. — *S. hebecarpa* Nees in Wight, Contr. Bot. Ind.: 117, 1830; F.B.I.: 689; Mat. F.M.P.: 113; Ridl. 1911: 225; F.I.C.: 166.

N. — Chiangmai, Doi Suthep, in dry deciduous forest, 700 m; *Smitinand 3229* (BK, Kerr 1269) (BM).

Kamphaeng Phet, common in teak forest, 200 m; *Smitinand 6110* (L).

S.E. — Chanburi, Makhom, common in thickets, 50 m; *Smitinand 5743* (L).

Trat, among undergrowth along edge of evergreen forest, 50 m; *Smitinand 1111* (BKF).

S.W. — Kanburi, Hin Dat; Put 62 (BK, BKF, BM, BO, L).

Brangkael, along forest paths, 150 m; *den Hoed & Kostermans 654* (*Kuene Noi R. basin exp. 1946*) (L).

Near Kin Sayek, c. 120 km NW of Kanburi, mostly dry limestone rocks, bank thickets, 100 m; *Kostermans 1099* (*Kuene Noi R. basin exp. 1946*) (BO, L).

Rathuri, in deciduous forest, under 50 m; *Kerr 9930* (BK, BKF, BM).

PEN. — Surat, in evergreen scrub, under 10 m; *Kerr 11259* (BK, BKF, BM, BO, K, Satul. beaths; *Ridley 14807* (SING)).

DISTR. From India through S. Asia to Japan and through Malaysia, Queensland and New Caledonia.

155. *S. TERRESTRIS* (L.) Pass., Rhodora 26: 159. 1924; S. T. Blake, Proc. Roy. Soc. Queensl. 62: 89. 1952; Journ. Arn. Arb. 35: 228, 1954. — *Zizania terrestris* L., Sp. Pl. 2: 991. 1753. — *S. elata* Thwaites, En. Pl. Zeyl.: 33. 1864; F.B.I.: 690; Mat. F.M.P.: 114; F.I.C.: 167; Turr.: 426; F.M.P. 179.

N. — Chiangmai, Chiangdao, common in evergreen forests, 1030 m; *Khanthachai 215* (RFD 18179) (L).

Tuk, on road to Maesawt, in old clearings, 500 m; *Smitinand 5938* (L).

Phetchabun, Lomkoo, Phuee, in deciduous forest, 800 m; *Smitinand 2610* (den Raymond).

S.E. — Krabi, Bunkeng, evergreen forest, 25 m; *Marcus 2558* (BM).

Chanaburi, Kao Petchakut, 3200 ft; *Nai Nee 75* (BM).

Kao Chang, common by stream on sandy bank, 100 m; *Smitinand 2173* (L).

S.W. — Near Neehey, near Wangka, 150 m; *den Hoed 183* (*Kuene Noi R. basin exp. 1946*) (K, L), *Wichian 323* (L).

Prachuap, Kao Luang, in open scrub, 1200 m; *Kerr 10252* (BK, BM).

Chumpawn, Kao Tong, open scrub, 700 m; *Kerr 11536* (BK, BM, K).

PEN. — Ranawong, Kao Pawta Luang Kao, in open evergreen ridge, 1300 m; *Kerr 10963* (BM, K); Kao Pawta Chongdong, in evergreen scrub, 900 m; *Kerr 1470* (BK, BM, K).

Langman, Kao Nom Suo, in evergreen forest, 900 m: *Kerr 12048* (BK, BM).
 Pang-nga, Kao Katakwan, in evergreen forest, 900 m: *Kerr 12453* (BK, BM).
 Erabi, in open spots, 1200 m: *Kerr 18709* (BK, BM).
 Trang, Chawng, by stream in evergreen forest, 100 m: *Smithson 4072, 4080* (L).
 Pattani, Belong, Gunung Ina, in evergreen forest, 1200 m: *Kerr 7545* (BK, BM).
 Hochaw, in evergreen forest, 500 m: *Kerr 7138* (BK, BM).

DISTR. From Ceylon and India to China, Formosa, the Riu Kiu Islands, and through Malaysia to Australia.

156. *S. KERRI* Turr., Kew Bull. (1910): 384, 1910; F.I.C.: 165; Turr.: 425.

N — Chlengmai, Doi Suthep, in jungle, 1000—1500 ft: *Kerr 1222* (K; type).
 Chlengmai (?), lateritic soil, open country, 1000 ft: *Howard 20* (K).

NE — Loi, Wang Saphung, Sithan, swamp, 300 m, local name *yah poun khao*; *Dee et al. (RFD 4813)* (BKF, MTJH).

DISTR. Annam.

157. *S. CILIARIS* Nees in Wight, Centr. Bot. Ind.: 117, 1834; S.T. Blake, Journ. Arn. Arb. 35: 227, 1954. — *S. chinensis* Kunth, En. 2: 357, 1837; F.B.I.: 690; Mat. F.M.P.: 114; F.I.C.: 167; F.M.P.: 180. — *S. bancana* Miq., Fl. Ind. Bat., Suppl.: 602, 1861; F.B.I.: 693; Mat. F.M.P.: 112; Ridl. 1911: 225; F.I.C.: 168; F.M.P.: 178. — *S. bancana* Miq. var. *nana* Ridl., Journ. Str. Br. Roy. As. Soc. no 59: 225, 1911; F.M.P.: 178.

NE — Chabari, Mahkam, common in thickets, 50 m: *Smithson 5748* (L); common in deciduous forest, 100 m: *Smithson 4050* (L, MTJH); Trat, Kao Kuap, in light evergreen forest, 600 m: *Kerr 17748* (BK, BM).

NE — Surat, Kantoli: *Pat 4169* (BK, BM).

Trang, Huay Yawt, Thale Sawng, very common in evergreen forest, 100 m: *Smithson 4147* (L).

Songkhla, Tapa, in open waste ground: *Kerr 14701* (BKF, BM).

Satui, in scrub, 5 m: *Kerr 13728* (BK, BM, K, P); Satui, heaths: *Ridley 14804* (type collection of *S. bancana* var. *nana* Ridl.) (K, SING).

DISTR. From Burma through Thailand and Indo-China to S. China; Malaysia, Solomon Islands, tropical Australia.

158. *S. OBLATA* S. T. Blake, Blumea 11, ined. 1961. — *S. levis* (non DC!) F.B.I.: 694; F.K.C.: 93; Will.: 225; Mat. F.M.P.: 111; Hoss. 1910: 463; F.I.C.: 169; Ridl. 1920: 124; F.M.P.: 177.

C — Bangkok, waste ground in forest garden: *Kerr 8874* (BK, BKF, BM, K, SING); *Muraw 845* (BM).

E — Trat, Koh Chung, edge of water: *Eryl Smith 301* (BK, BKF); Khlawng Nonst, in open rather marshy ground, under 10 m: *Kerr 9203* (BK, BKF, BM, K); Lon Dan: *Joh. Schmidt 220* (C); Kaw Kut, common in coconut plantations, 5 m: *Smithson 5706* (L).

S.W. — Bangkok, in marshes: *Keith 232* (SING).

PEN. — Langsuan, by pond in open scrub, under 50 m: *Kerr 11921* (BK, BKF, BM, E); Nakawa Srithamarat, Tung Song, Ao Wang Kram, in valley; *Rubell 271* (BKF, BM).

Songkhla, Tapa, in scrub: *Kerr 14694* (BK, BKF, BM); Koh Gab: *Klont 4603* (K); Satul, in scrub, 5 m: *Kerr 18726 A* (K).

DISTR. Ceylon, Assam, Burma, Indo-China, Malaysia.

The name *Scleria levis* Retz. has wrongly been applied to this well characterized species, for which the new name *Scleria oblata* will be published by Dr. S. T. Blake, who pointed to the confusion (*Journ. Arn. Arb.* 35: 227, 1954).

159. *S. POAEFORMIS* Retz., Obs. 4: 13, 1786. — *S. oryzoides* Presl., *Reichenb.* 1: 201, 1828; F.B.I.: 691; Mat. F.M.P.: 110; Ridl. 1911: 226; F.I.C.: 164; F.M.P.: 177; Kth.: 57.

E. — Korat, Ban Chumsaeng, in-marsh: *Nai Nee 263* (BK, BM, K); Pak Chawang, in stagnant pools, 300 m: *Kerr 20461* (BK, BM).

S.E. — Chanthuri, common in wet places, 120 m: *Smithson 4089* (L).

S.W. — Chumphaw, Ban Tung Maha, in marshy ground, near sealevel: *Kerr 1190* (BK, BM, K, L).

PEN. — Surat, Kanchanadii, marshy ground in savannah, 5 m: *Kerr 18101* (BK, BM, K).

Songkhla, Tapa, in open swampy ground, under 50 m: *Kerr 14504* (BK, BM).

Pattani, Bang Nana, very common in open marshy ground, near sealevel: *Kerr 7156* (BK, BM, K).

Lake Ta Loi Nawa: *Gynera-Pangnan 254* (K, L).

Klawng Rangsit, Tangaburi, near canals, used for building matting huts: *Lodell 11* (BK, K).

DISTR. Tropical E. Africa; from India and Ceylon to S. China and tropical Australia.

160. *S. PSILOSTACHYA* Clarke, Fl. Br. Ind. 6: 691, 1894; F.I.C.: 164.

N. — Nakawa Savan, Hua Wai: *Pet 4091* (BK, BM).

C. — Saraburi, Muen Sa, among grass in savannah: *Kerr 7601* (BK, BM, K; SING).

DISTR. Very local and scattered from India through Thailand and Malaysia to N. Australia.

161. *S. SCROBICULATA* Nees & Mey. ex Nees in Wight, Contr. Bot. Ind. 117, 1834.

E. — Korat, Ratok, by stream in evergreen forest, 400 m: *Kerr 8167* (BK, BM).

C. — Bangkok, in waste shady ground; tidal: *Kerr 4000* (BM, K).

DISTR. From S. E. Asia through Malaysia to Queensland and Samoa.

Scleria verobiculata and *S. purpurascens* are so closely related that I feel inclined to treat them as races of a single species.

162. *S. PURPURASCENS* Steud., Syn. 2: 169. 1855. — *S. multifoliata* Back., Linnaea 38: 510. 1874; F.B.I.: 693; F.I.C.: 93; Will.: 225; Mat. F.M.P.: 112; Hoss, 1910: 463; F.I.C.: 169; F.M.P.: 178.

S.E. — Koh Chang, jungle near Klong Munsi, gravel: *Jah. Schmidt 278* (C).

PEN. — Ranwang, Lam Liang, in evergreen forest, 50 m: *Kerr 1433* (BK, BM, BO, K).

Bural, in evergreen scrub, under 10 m: *Kerr 1136* (BK, BM); Bandon River: *Seidenfaden 2159* (C, SING).

DISTR. Burma, Indo-China, Malaysia.

163. *S. SUMATRENSIS* Retz., Obs. 5: 19, t. 2. 1789; F.B.I.: 693; Mat. F.M.P.: 113; F.I.C.: 170; F.M.P.: 179.

S.E. — Koh Chang, Lam Dan, plains: *Jah. Schmidt 88* (C).

PEN. — Seras, Khun Talae Lake, swamp: *Seidenfaden 2319* (C); Bandon, along a Klong: *Seidenfaden 2692* (C).

DISTR. From Ceylon and India to Formosa and Queensland.

164. *S. CORYMBOSA* Roxb., Fl. Ind. ed. 2, 3: 574. 1832; F.B.I.: 686; Mat. F.M.P.: 109, p.p.; F.M.P.: 176, p.p. — *S. ridleyi* Clarke, Fl. Br. Ind. 6: 686. 1894; Mat. F.M.P.: 109; F.I.C.: 160.

E. — Singha-Samsawang, by stream in scrub jungle, 300 m: *Kerr 6561* (BK, BM, P).

S.E. — Tint, Talaum, glade in evergreen forest, under 50 m, local name *pa kum bung*: *Kerr 1783* (BK, BM).

PEN. — Ranwang, La-on, marshy ground in evergreen forest, 10 m: *Kerr 1633* (BK, BM, BO, K, L).

Hogoi: *Haniff & Nur SF 3001* (K, SING).

DISTR. From India and Ceylon to S. China, W. and N.W. Malaysia.

165. *S. PARVULA* Steud., Syn. 2: 174. 1855. — *S. tessellata* (non Willd.) F.B.I.: 686, p.p.; F.I.C.: 162.

S.E. — Loi, common in savannah, 1300 m: *Smithson 5621* (L).

DISTR. Tropical Africa; from Nepal, India, and Ceylon to S. China, Japan, Korea, and Malaysia.

166. *S. BIFLORA* Roxb., Fl. Ind. ed. 2, 3: 573. 1832; F.B.I.: 687; Mat. F.M.P.: 114; F.I.C.: 163, f. 21, 7; F.M.P.: 180.

PEN. — Phang-Nga, Pulau Teban: *Haniff & Nur SF 3020* (K, SING).

DISTR. S.E. Asia, from Ceylon and India to S. China, Formosa, the Riu Kiu Islands, eastwards to the Philippines and Celebes, southwards to Java.

ssp. *ferruginea* (Ohwi) Kern, *stat. nov.* — *S. ferruginea* Ohwi, *Ad Phytotax. Geob.* 7: 37, 1938.

S.E. — Prachinburi, Area Prachet, in open grassy low-lying ground, 50 m: *Kerr 2556* (BK, BM, K).

DISTR. of the subspecies: Rin Kiu Islands, Formosa, Indo-China, Malay Peninsula.

167. *S. MIKAWANA* Makino, *Bot. Mag. Tokyo* 27: 57, 1913. — *S. teres-lata* (non Willd.) F.B.I., 686, p.p.

N.E. — Loi, Phu Krading, common by stream and in damp place, 1300 m: *Smitinand 1845* (herb. Raymond).

DISTR. Tropical Africa; from Ceylon and India to Japan and New Guinea, very scattered.

168. *S. RUGOSA* R. Br., *Prodr.*: 240, 1810. — *S. flaccida* Clarke, *Fl. Br. Ind.* 6: 688, 1894, non Steud. 1855. — *S. zeylanica* (non Poir.) F.B.I.: 687, p.p.; *Mat. F.M.P.*: 110; *F.I.C.*: 163; *F.M.P.*: 177.

S.E. — N. N. Kheo, Setraha forest, 400 m: *Mrs Collins 1900 A* (BK, K).

DISTR. From Ceylon and India to S. China, Formosa, and Japan through Malaysia to N. and N. E. Australia and New Caledonia.

169. *S. THWAITESIANA* Boeck., *Linnaea* 38: 454, 1874. — *S. zeylanica* (non Poir.) F.B.I.: 687, p.p. (quoad specim. ceyl.).

N.E. — Loi, Phu Krading, 1300 m: *Smitinand 1848 B* (BKF).

S.E. — Trat, Kao Samling, in open grassy ground, 20 m: *Kerr 2484* (BK, BM, E).
P.E.N. — Surat, Kantali: *Pat 4168* (BK, BM).

Between Trang and Krabi, common in wet locality, 100 m: *Smitinand 1861* (*RFD 16865*) (BKF, L).

DISTR. Ceylon (type locality).

Clarke and subsequent authors reduced this species to the synonymy of *S. rugosa* R. Br. (*S. zeylanica* sensu Clarke). In my opinion it is readily distinguishable by the following characters: Stems strictly erect, very slender. Leaves rigid, canaliculate, narrow, 1—2 mm wide, glabrous. Terminal panicle not pseudo-lateral, its bract not or only slightly overtopping the inflorescence. Peduncles of the lateral panicles setaceous. Nut obtusely trigonous, smooth, very shining. Disk thin, hardly lobed, not cellular-glandular.

170. *S. NEESII* Kanth, *En.* 2: 358, 1837; F.B.I.: 688; *F.I.C.*: 164, 1, 21, 6. — *Hypoporum capitatum* Nees, *Edinb. New Phil. Jour.* 17, no 24: 267, 1834. — *S. capitata* (Nees) H. Pfeiff. in *Pedde, Rep.* 26: 262, 1925 in syn., non Willd. (1805).

S.E. — Chanburi, common in wet sandy soil in open *Dipterocarpus* forest, under 100 m: *Smithland 3503* (L); Mahkam, in open deciduous forest, 100 m: *Smithland 3041* (RFD 12615) (L).

PEN. — Surat, open scrub, under 10 m: *Kerr 11883* (K).

Between Trang and Krabi, in wet localities, 100 m: *Smithland 4148* (RFD 10863) (L).

DISTR. Ceylon, Cochinchina, Annam, Malay Peninsula.

171. *S. TONKINENSIS* Clarke, Kew Bull. add. ser. 8: 57. 1908.

S.E. — Nakawon Panoon, Ta Uten, by road-side in mixed forest, sandy soil, 1200 m: *Kerr 21574* (BK, BM, K).

F. — Korat, Ban Chumaseung: *Nai Nee 262* (BK, BM, BO, K).

Srisaket, Kantharoom, common in scrub jungle, under shade, 100 m; used locally for lumbering mothers: *Smithland 484* (RFD 1932) (K, L).

S.E. — Prachinburi, Aran Prathet, railway embankment, 50 m: *Kerr 12625* (BK, BO, K).

Chamburi, Mahkam, Okphak, in dry mixed deciduous forest, 100 m: *Smithland 3018* (RFD 22695) (BK); Chanburi, Mahkam, common in the plain, along edge of thickets, 20 m: *Smithland 3758* (RFD 21502) (L).

Trat, Kao Kuap: *Pat 2912* (BK, BM).

S.W. — Chumphawon, Bang Son: *Pat 1690* (BK, BM, K); same locality, sandy heath near coast: *Hasselt & Nee SP 4221* (K, SING).

PEN. — Surat, in evergreen scrub: *Kerr 11749* (BK, BM, K); Kantuli: *Pat 4166* (BK, BM); Tha Phet, common along edge of water-hole, 50 m: *Smithland 5617* (L).

DISTR. Also in Tonkin (type locality), Cambodia, Cochinchina, and Hainan.

172. *S. LITHOSPERMA* (L.) Sw., Prodr.: 18. 1788; F.B.I.: 685; Mat. F.M.P.: 168; Ridh. 1911: 225; 1912: 63; F.I.C.: 161, f. 21, 5; F.M.P.: 176; Roy. 1957: 62. — *Scirpus lithospermus* L., Sp. Pl. 1: 51. 1753.

L. — Korat, Hui Taleng: *Pat 2227* (BK, BM).

C. — Chaibadan, Dong Pys Yen, in mixed forest, 50 m: *Kerr 7225* (BK, BM, K).

S.E. — Trat, Kaw Chang, Kilaung Son, along edge of scrub jungle, 10 m: *Smithland 5673* (L).

Chanthaboon: *Vesterdal 478* (C, SING).

Prachinburi, Nawng Phu, Bandan, 200 ft: *Mrs Collins 848* (BK, K); Srirocha: *Pat 450* (BK, BM, BO, K); N. N. Kheo-Srirocha forest, 400 ft: *Mrs Collins 1900* (BK, K).

S.W. — Prachuap, Ban Nawng Kang, in dry evergreen forest, under 50 m: *Kerr 16010* (BK, BM).

PEN. — Surat, Kantuli: *Pat 4154* (BK, BM); Kaw Tao, in dry evergreen forest, 10 m: *Kerr 11168* (BK, BM, BO, K); same locality, in light evergreen forest, 300 m: *Kerr 16020* (BK, BM).

Songkhla, Kampongpet, in evergreen forest, 50 m: *Kerr 15975* (BK, BM, K).

Pattani, Banang Sia, in banana plantation, 50 m: *Kerr 2158* (BK, BM, K).

Satul, Batang, on rocky ground, 50 m; *Kerr 14034* (BK, BM); Adang, in evergreen forest, 5 m; *Kerr 13993* (BK, BM); Bukit Raja Wang; *Ridley 14805* (SING).
DISTR. Pantropic.

var. *LINEARIS* Benth., Fl. Austr. 7: 430, 1878. — *Hypoporum roxburghianum* Nees ex Boeck., Linnaea 38: 452, 1874. — *Hypoporum roxburghii* Nees ex Clarke, Fl. Br. Ind. 6: 686, 1894. — *S. lithospermia* (L.) Sw. var. *roxburghii* Clarke, Fl. Br. Ind. 6: 686, 1894; Mat. F.M.P.: 106, N.E. — Sakawa Panom, Muk Dahur, Pu Mono, in deciduous forest, 300 m; *Kerr 2110* (BK, BO, K).
S.E. — Trat, Kaw Chang, Salak Kaw, in loose dumps, open deciduous forested slope near sea; *Kerr 6891* (BK, BM, K, NY, P).

DISTR. of the variety. From India and Ceylon to Indo-China, and through Malaysia to tropical Australia.

173. *S. PERGRACILIS* (Nees) Kunth, En. 2: 354, 1837; F.B.I.: 635; F.I.C.: 160, f. 21, 1-3; Turr.: 426. — *Hypoporum pergracile* Nees, Edich. New Phil. Journ. 17, no. 84: 267, 1834; in Wight, Contr. Bot. Ind.: 318, 1834.

N. — Doi Suthep, 1200—1500 ft; *Kerr 1428* (BK, BM, P); in open marsh, 2200 ft; *Kerr 2647* (BM, K).

N.E. — Loei, Phu Krading, common among grasses in savannah, 1390 m; *Smithson 1605* (herb. Raymond).

S.E. — Krabi, Watana, in open grassy forest, 50 m; *Kerr 9788* (BK, BM, K).
Baw Luang, in open marshy ground; *Kerr 8266* (BK, BM, K, P).

DISTR. Tropical Africa; from India and Ceylon to S. China and Malaysia.

174. *S. BENTHAMII* Clarke, Kew Bull., add. ser. 8: 58, 1908. — *S. khasiana* Clarke in Hook. f., Fl. Br. Ind. 6: 692, 1894; Journ. Linn. Soc., Bot. 34: 102, 1898, non Boeck. (1896).

N. — Chiangmai, Doi Suthep, common in open grassy jungle, 200—1000 m; *Kerr 3358* (BM).

N.E. — Loei, Phu Krading, common in savannah, 1300 m; *Smithson 1642* (herb. Raymond).

DISTR. Khasia, Indo-China, Luzon, Queensland.

Scleria thomsoniana Boeck., Linnaea 38: 479, 1874, and *S. khasiana* Boeck., Cyp. Nov. 2: 29, 1890, were based on the same collection, viz *Scleria* sp. 12, Herb. Ind. Or., Hook. f. & Thoms. As the latter binomial is nomenclaturally superfluous, Clarke used the same combination again for a quite different species. This procedure is contrary to the present-day Code. As *Scleria benthamii* Clarke, thus far only known from a single Australian collection (Queensland, Brisbane R., F. v. Müller 61, K) appears

to be conspecific with the Asiatic plants, this is the earliest legitimate name of the species.

Seleria benthamii is most easily recognizable by the characteristic shape of the hypogynous disk, which reminds one of a tricorn hat. In habit it is extremely similar to *S. levis* Retz., but easily recognizable by the more distinctly reticulated, hardly apiculate nut, and the different shape and texture of the hypogynous disk. In *S. levis* the lobes of the disk are thin, lanceolate, brown, 1—1½ mm long, in *S. benthamii* thick, much shorter, ovate, whitish, with a minute, erect apicula at the top. Probably there is also a difference in the contraligule (i.e. the tongue-shaped prolongation at the top of the leaf-sheath on the anterior side). In *S. levis* this contraligule has (always?) a small, easily overlooked membranous appendage at the top, which is lacking in the few specimens of *S. benthamii* I have seen.

Seleria benthamii is also in Indo-China (Tonkin, route de Laokay à Chapa, savannes herbeuses, 1000 m: *Pételat* 8548, herb. Raymond).

SPECIES RECORDED FOR THAILAND NOT SEEN BY ME:

1. *Cyperus clausenoides* Kunth; Turr.: 422.
2. *Cyperus exaltatus* Retz., var. *digynus* Williams; 224. — According to Kükenthal, Pflanzenr., Heft 101: 71. 1935 = *C. alopecuroides* Roth. Kükenthal did not see the collection on which the record was based.
3. *Cyperus kurzii* Clarke; Koy. 1955: 209; 1957: 28.
4. *Cyperus olawii* Kük.; Koy. 1955: 205; 1957: 24.
5. *Fluhriatylis haspaniformis* Koyama, Contr. Inst. Bot. Univ. Montréal no. 70: 45. 1957.
6. *Fluhriatylis tenera* R. & S.; Ost.: 719; Hoss. 1910: 462; F.I.C.: 112.
7. *Mariscus clarkii* Turr.: 422. Kükenthal, Pflanzenr., Heft 101: 518. 1935, reduced this to a variety of *Cyperus cyperoides* (L.) O. Kuntze.
8. *Scirpodendron ghaeri* (Gaertn.) Merr. (*S. costatum* Kurz; Ridl. 1911: 225), "Common in tidal swamps, Setul". I have not seen any specimen from Setul in the Singapore Herbarium.
9. *Scirpus fluitans* L.; Koy. 1957: 61.
10. *Scirpus triangulatus* Roxb.; Koy. 1957: 59. I doubt whether this is specifically distinct from the widely distributed and extremely polymorphic *S. mucronatus* L.
11. *Scirpus triquetus* L.; Koy. 1957: 62.

INDEX TO COLLECTORS' NUMBERS

The first number of each pair is the collector's number, the second refers to the number of the species in the text. See also Addenda.

Amaki 57; 53.

Baumgarten, S. 654: 94 — Baumag, see Baumak — Baumak 8: 31; 9: 128 — Baumak 5: 131; 133: 45; 135: 8; 174: 61; 195: 145; 197: 139; 198: 19; 205: 35; 211: 113; 212: 42; 217: 100; 218: 98; 231: 115; 233: 7; 264: 113; 265: 106; 240: 137; 241: 110; 244: 53.

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Fruech, C. W. 439: 110; 443: 162; 4826: 125.

Gyugan-Vaughan 255: 159; 256: 92.

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